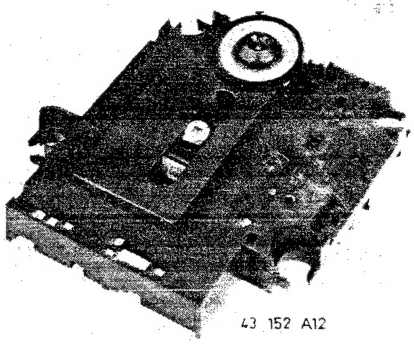
Compact Disc Drive

RCD 1.2D

Service
Service
Service



Service Manual

COMPACT disc DIGITAL AUDIO

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CLASS 1
LASER PRODUCT

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

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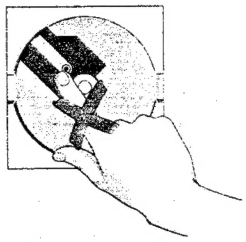
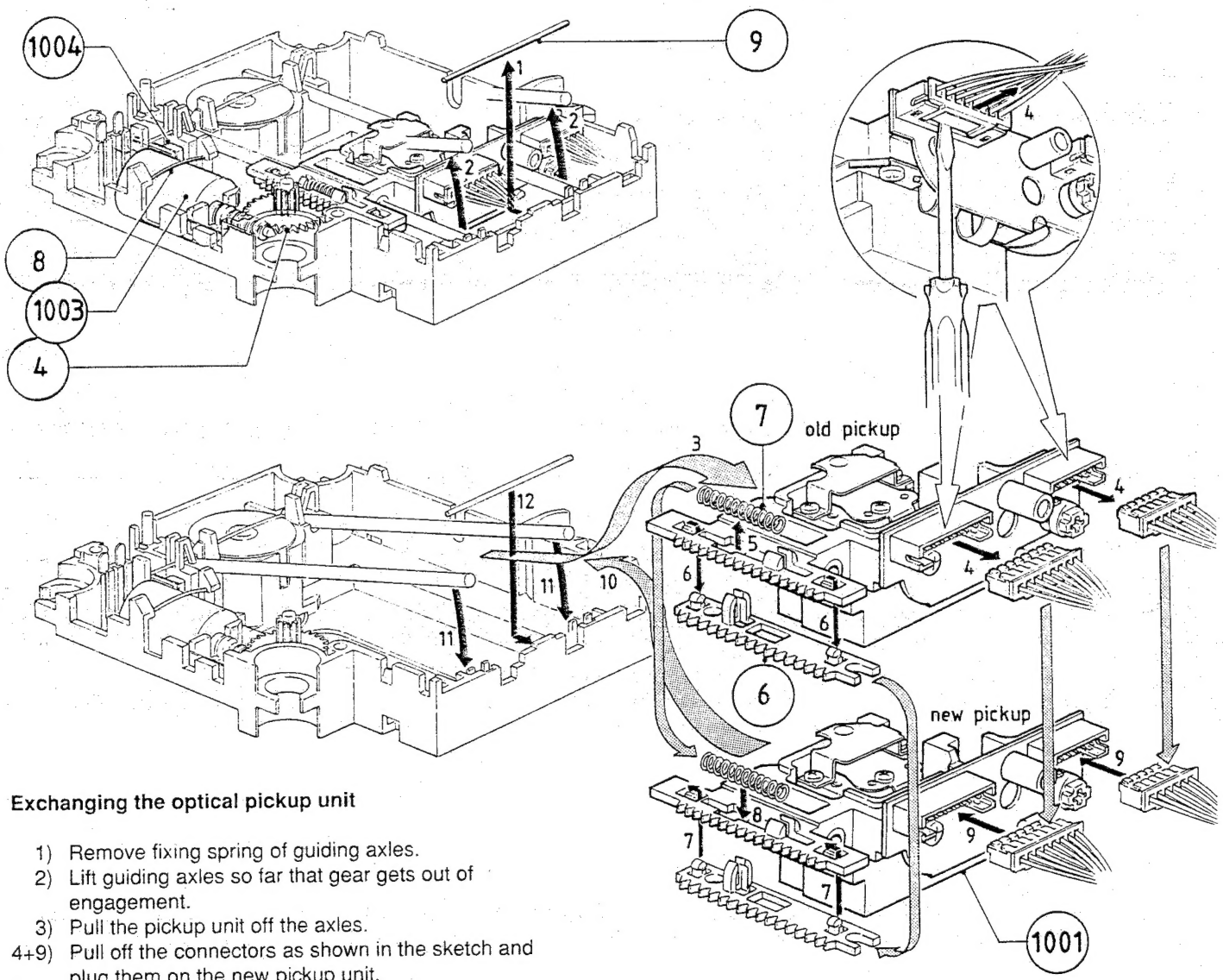
Exchange instruction for the OPTICAL PICKUP unit

WARNINGS: Danger of electrostatic discharge!
The laser diode is more sensitive to ESD than MOS ICs.
Therefore take care of ESD-protection whenever working on the disc drive.

Never touch the lens!





Exchanging the optical pickup unit

1) Remove fixing spring of guiding axles.
2) Lift guiding axles so far that gear gets out of engagement.
3) Pull the pickup unit off the axles.
4+9) Pull off the connectors as shown in the sketch and plug them on the new pickup unit.
5+6) Remove the toothed bar plus compression spring.
7+8) Mount toothed bar and compression spring on new pickup unit.
10) Put the new pickup unit on the guiding axles.
11) Put guiding axles down to the chassis while positioning the pickup unit so that gear is forced easily into engagement.
12) Mount fixing spring of guiding axles.

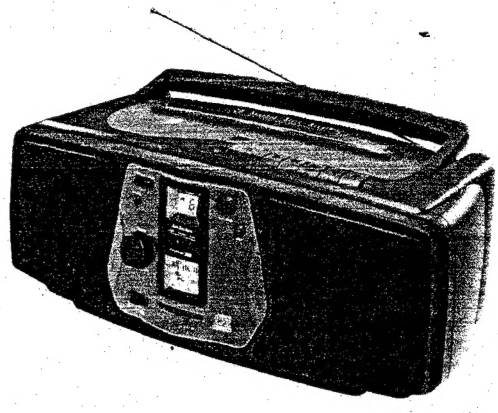
IMPORTANT NOTE:
All electrical adjustments have to be carried out new. Follow the adjustment table of the service manual for the relevant set the disc drive is used.
The laser control is located on the optical pickup unit. The laser current has therefore already been adjusted by the factory.

	4822 691 20768	RCD1.2D disc drive assy
4	4822 522 32451	gear wheel
6	4822 522 32453	toothed bar
7	4822 492 51979	spring, compression
8	4822 492 63941	spring, wire (motor)
9	4822 492 63942	spring, wire (axles)
1001	4822 691 30327	optical pickup unit
1003	4822 361 21113	servomotor, RF300C-11440
1004	4822 276 12163	switch, leaf

Only those parts of which a service code number is stated are service parts.

CD Stereo Radio Recorder AZ8040/00/05/20/21/37/41

Service
Service
Service



Service Manual

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4822 725 25111

PHILIPS

PHILIPS

PCS 63 873

SPECIFICATION

GENERAL

Mains voltage		: 230V - /00/20 240V - /05 120V - /37 120V/230V -/21/41
Mains frequency		: 50Hz - /00/05 60Hz -/17 50/60Hz -/21/41
Battery		: 9V (R20 x 6)
Power consumption		: 24W max.
Dimension (W x D x H)		: 420 x 180 x 229mm
Weight		: 3.7kg

TUNER : FM SECTION

Tuning range		: 87.5MHz - 108MHz
IF frequency		: 10.7MHz
Sensitivity at 26dB S/N		: < 23µV
Selectivity at 600kHz bandwidth		: > 20dB
IF rejection		: > 50dB
Image rejection		: > 20dB

TUNER : AM SECTION -/00/05/20/21/41

Tuning range	MW	: 522kHz - 1607kHz
	LW	: 148.5kHz - 284kHz – not for /21/41
IF frequency		: 468kHz
Sensitivity at 26dB S/N	MW	: < 4.0mV/M
	LW	: < 6.0mV/M – not for /21/41
Selectivity at 18kHz bandwidth	MW	: > 16dB
	LW	: > 20dB – not for /21/41
IF rejection	MW	: > 24dB
	LW	: > 26dB – not for /21/41
Image rejection	MW	: > 28dB
	LW	: > 30dB – not for /21/41

TUNER : AM SECTION -/37

Tuning range	AM	: 530kHz - 1710kHz
IF frequency		: 468kHz
Sensitivity at 26dB S/N	AM	: < 4.0mV/M
Selectivity at 18kHz bandwidth	AM	: > 16dB
IF rejection	AM	: > 24dB
Image rejection	AM	: > 28dB

AMPLIFIER

Output power at 10% distortion:	Mains	: 2 x 1.6W -1dB
	Battery	: 2 x 1.6W -1dB
Speaker impedance		: 2 x 6Ω
Frequency response within +7dB/-3dB		: 100Hz - 8kHz

CASSETTE RECORDER

Number of tracks		: 2 x 2 stereo
Tape speed		: 4.76 cm/sec ± 3%
Wow and flutter		: < 0.3%
Fast-wind time C60		: 120 sec
Bias system:	AM/FM	: 60kHz ± 3kHz
Recording playback frequency response within -8dB		: 250Hz - 6.3kHz
Signal to Noise ratio:	AM/FM rec	: > 40dB

COMPACT DISC

Frequency response within ± 3dB	: 30Hz - 160kHz
Signal/Hiss ratio	: > 80dB
Distortion at 1kHz	: < 0.3%
Channel difference at 1kHz	: < 2dB
Channel crosstalk at 1kHz	: 50dB

SERVICE HINTS

Service DISC - HOLDDOWN

The disc must always be fixed well on the turntable.
If the mechanism has to be dismounted for repair, a separate disc-holddown has to be used (e.g. service disc-holddown 4822 532 51871).
The CD mechanism then can function normally as in the set.

REDUCTION of REPAIR PRICE

If the disc drive does not function, in most cases the optical pickup unit will be defect.
To reduce the actual repair price it is recommended to replace the optical pickup unit only.
Follow the exchange instruction on the previous page.

CHARACTERISTIC FAILURES

Possible customer complaint:
- *no function, does not startup*
- *plays badly*
- *skips tracks*
- *very sensitive to shocks*

General observation by investigation:

HF- signal too small.

Cause: Mechanical x/y-adjustment of the diode array on the optical pickup unit has drifted.

Attention: The laser control of the RCD1.2 disc drive is located on the optical pickup unit. The laser current has been adjusted in the production line and is **not** intended to be **varied for service purposes.**

If the HF - signal is considerably smaller than 800mV$_{pp}$, check as follows:

* Play a disc.

* Turn the *FOCUS OFFSET* potmeter while observing the HF - signal:

  – *THE HF - SIGNAL DECREASES IN BOTH DIRECTIONS*
  → the x/y-adjustment of the diode array is o.k.

  – *THE HF - SIGNAL INCREASES IN ONE DIRECTION*
  → adjust to max. HF signal level and check

  FOCUS OFFSET voltage:

  ≤ ±100mV DC → x/y-adjustment of diode array within tolerance.

  > ±100mV DC → x/y-adjustment of diode array has drifted and is out of tolerance.
  → **exchange optical pickup unit!**

In case of a positive result – x/y-adjustment of diode array is o.k. – the reason for a too small HF signal might be a dying laser diode or any other fault in the electronic circuit.

CLEANING the LENSE

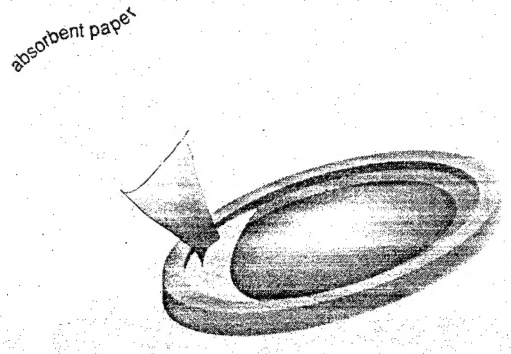
Principle: Avoid cleaning of the lens !

DUST particles are normally no major problem. They can be blown away with oilfree compressed air.

Finger - prints

If the lens is obviously polluted with finger - prints, it can be cleaned with alcohol or spirit.
Take a padstick and tip it into alcohol until it is soaked.
Then clean the surface of the lens by rotating the soaked padstick smoothly.
The alcohol will dissolve the finger - prints, rotation helps mechanically. Finally the lens will be filled with the dirty cleaning solvent.

Now incline the lens (disc drive) and soak the solvent up with absorbent paper.
The remnants of the solvent will evaporate.



Service Aids

Screw drivers:

Torx driver set T6 - T20	4822 395 50145
Torx driver T8	4822 395 50263
Torx driver T10 extended	4822 395 50423

Cassettes:

SBC 420 Test cassette Ferro - IEC I4822 397 30071

Compact disc:

SBC 429 Audio Signals disc 1 4822 397 30184

Service Hints

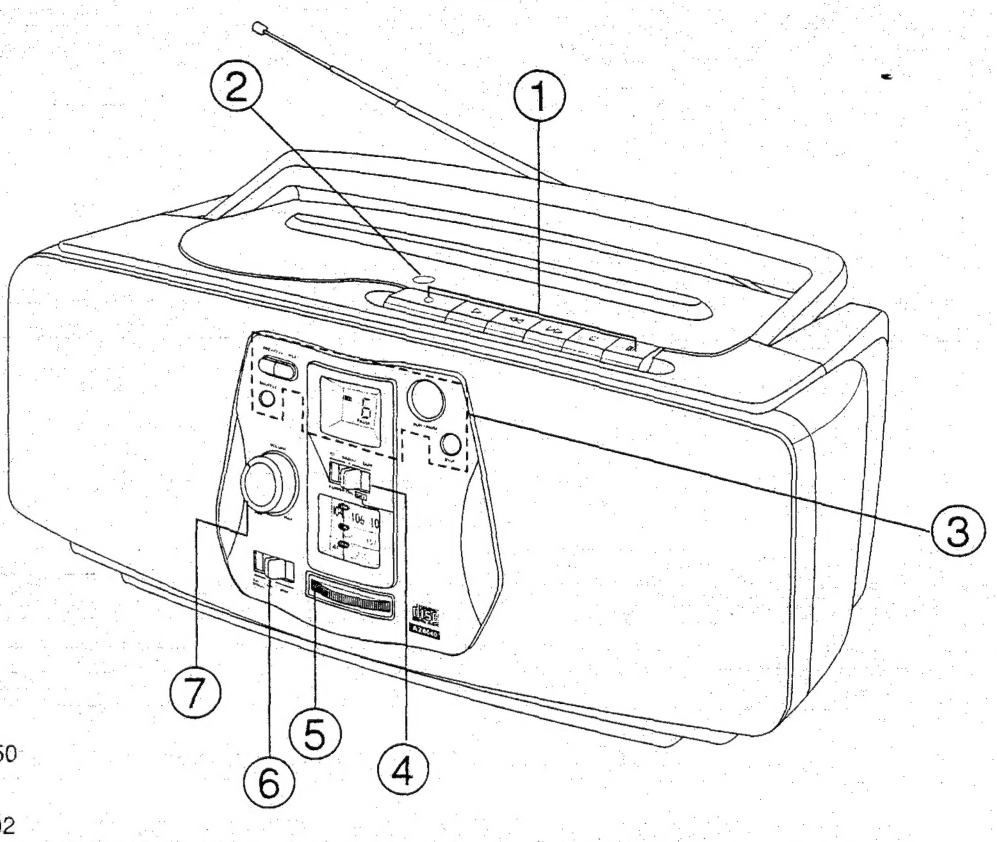
Align the Mode Selector switch (item no. 1550) and Mode Switch ④ to the left before encasing the Front cabinet to the Back Cabinet.

CD SERVICE MODE

Following can be tested with test programme.

* Sledge motor
* Disc motor
* Focus servo

Operation Sequence	Display Shows	Remarks	In case of problem
Step 0 Hold "Next" & "Previous" whle switching mode selector to "CD"		Sledge servo can be moved inward or outward by pressing "Previous" or "Next" respectively. Sledge move till key is released. Pressing "Shuffle" moves Dismotor clockwise. Pressing "Stop" moves Discmotor anti-clockwise. Discmotor turn till key is release.	Sledge motor and drive circuit for sledge motor. Disc motor and driver circuit for disc motor.
Step 1 Insert any disc. Close the door. Press "Play".		Focus on.	Focus servo circuit.
Step 2 Press "Play"		Disc motor on.	Disc motor and driver circuit for disc motor.
Step 3 Press "Play"		Radial Servo on. Mute is release. Holding "Next/Previous" key jump in small step. Holding "Shuffle/Play" key moves fast in/outside.	
From anywhere within the service program. Press "Stop" to get back to step 0. To leave service mode, switch selector to OFF position.			



Connections and Controls

①	Button Sets - Cassette	
②	CD/Cassette Door	
③	Button Sets - CD	
④	Mode Switch	1550
⑤	Thumbwheel - Tuning	
⑥	Band Switch	1102
⑦	Volume Knob	3500

TAPEDECK ADJUSTMENT

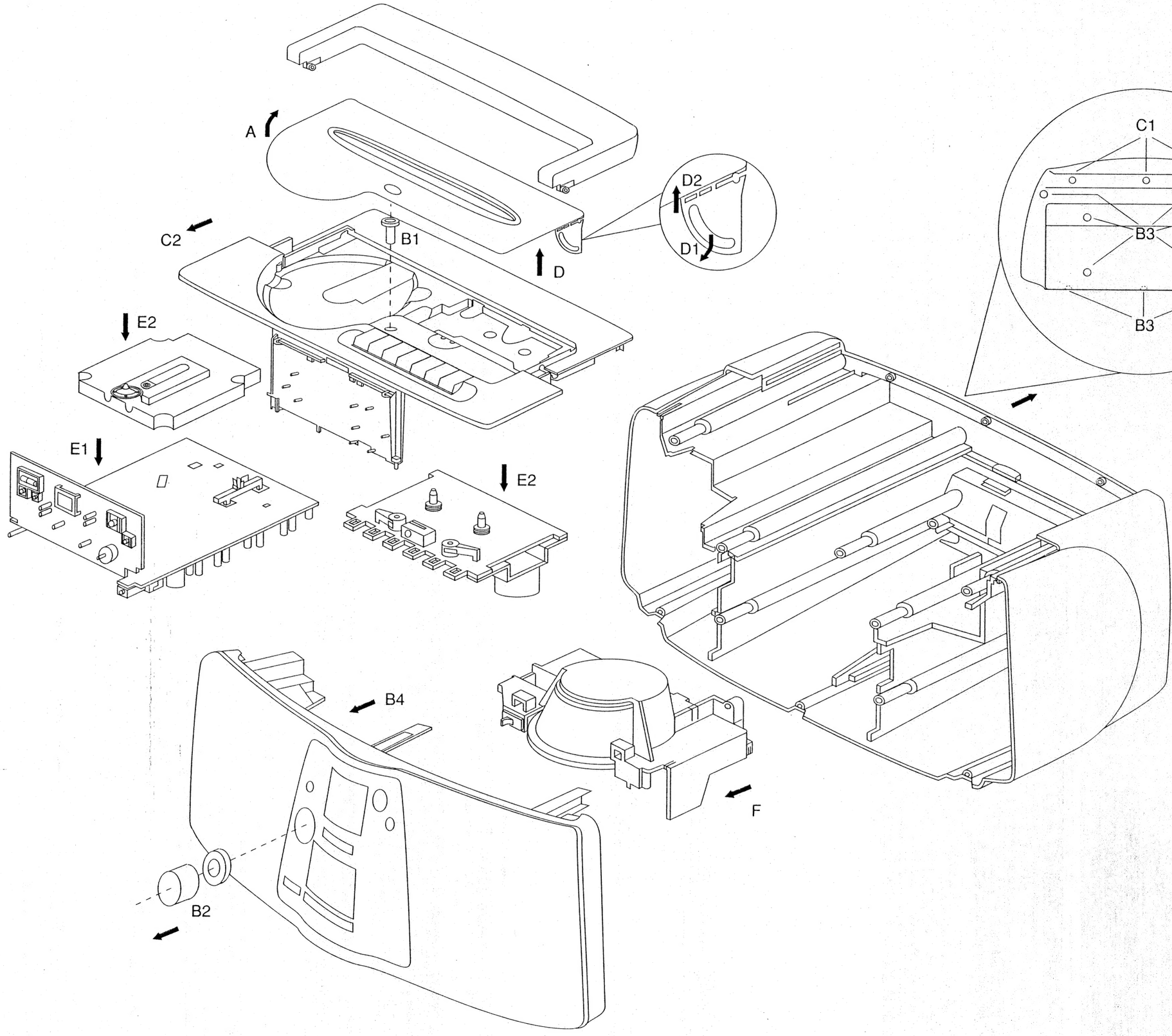
ADJUSTMENT	CASSETTE	SK . . .	TAPEDECK POSITION	MEASURE ON	READ ON	ADJUST WITH	ADJUST TO
Azimuth	10kHz SBC 420 *	Cass.	Play	* 1	mv-meter	Left hand Screw R/PB Head	Max.
Motor Speed	3150Hz SBC420 *	Cass.	Play	* 1	Wow and Flutter Meter	Preset in motor	* * a

* SBC 420 : 4822 397 30071

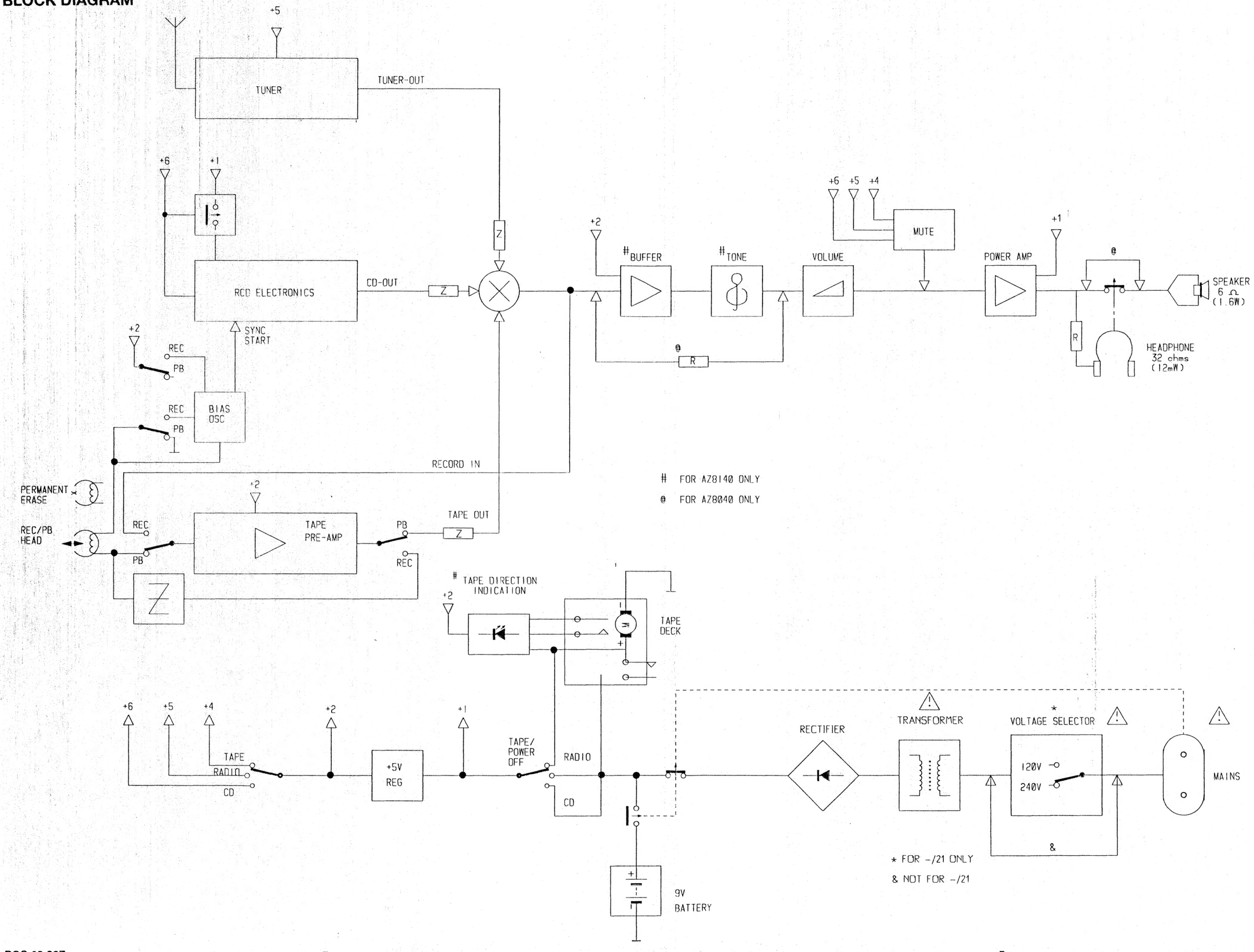
* * a The maximum permissible speed deviation is 3%.
Moreover, the wow and flutter value can be read.
This value should not exceed 0.3%.

* 1 Connected across the speaker terminals

DISASSEMBLY DRAWING



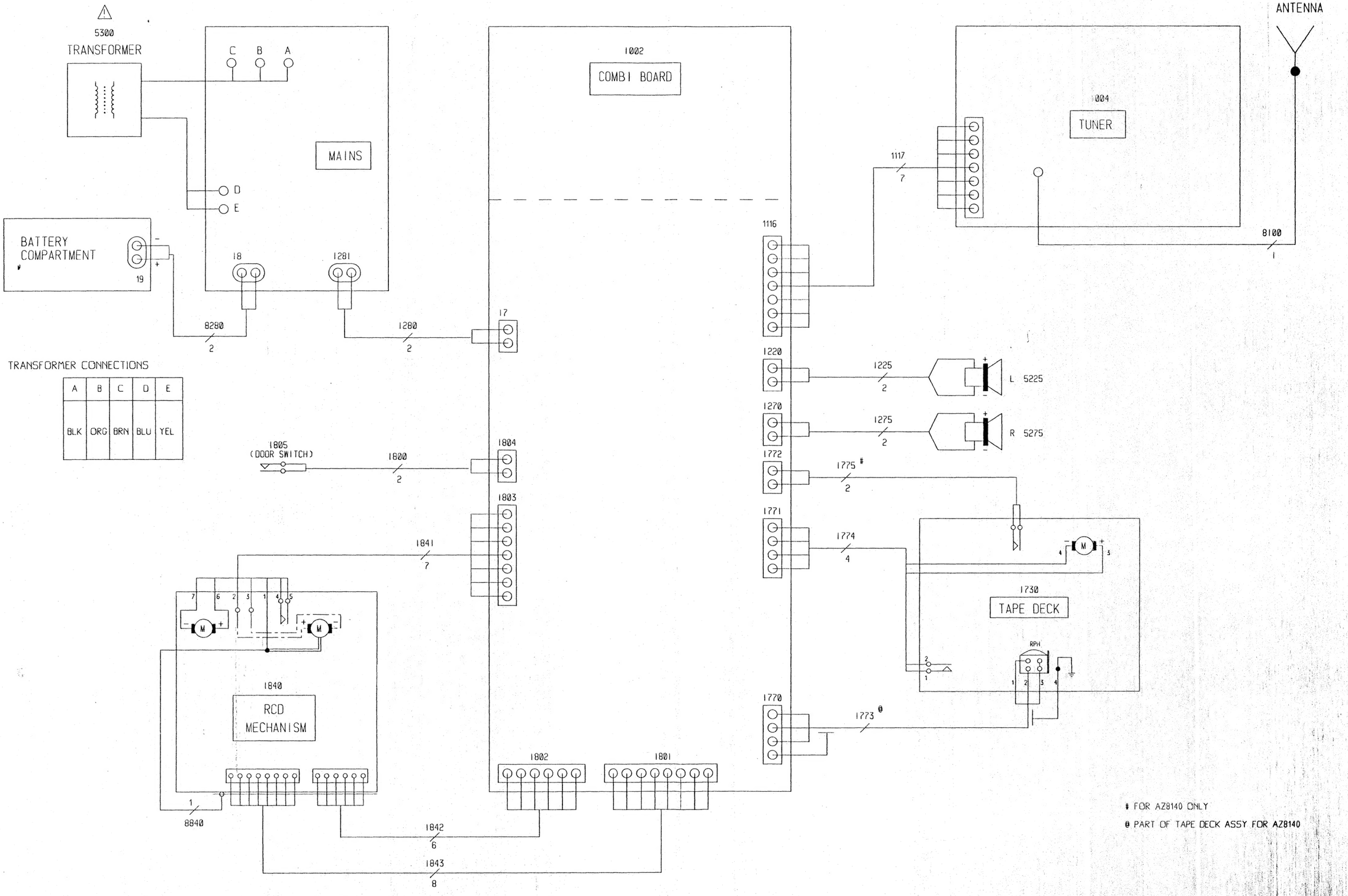
BLOCK DIAGRAM



FOR AZ8140 ONLY

@ FOR AZ8040 ONLY

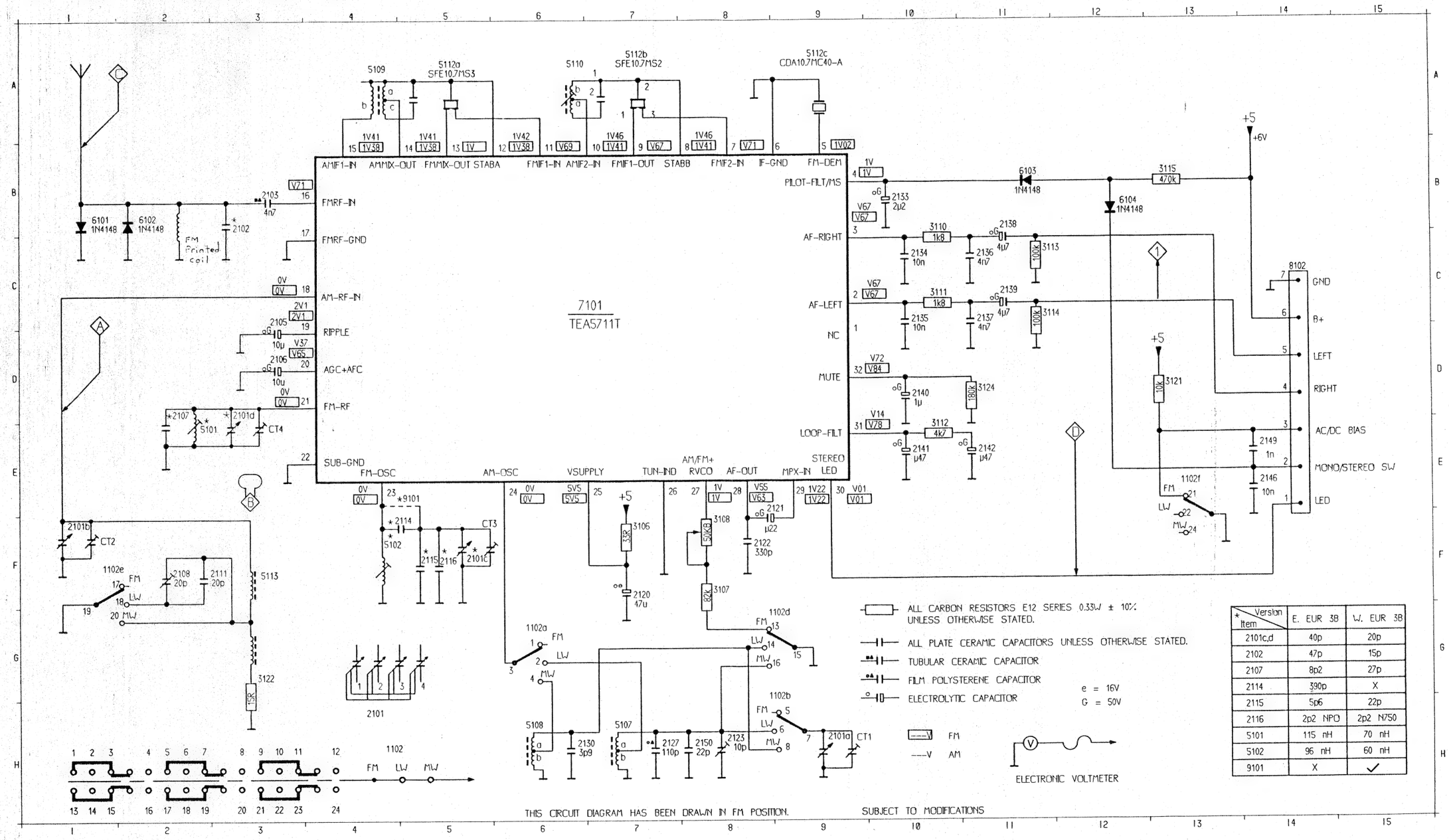
WIRING DIAGRAM



‡ FOR AZ8140 ONLY

θ PART OF TAPE DECK ASSY FOR AZ8140

TUNER CIRCUIT DIAGRAM - FM/LW/MW



* Item \ Version	E. EUR 3B	W. EUR 3B
2101c,d	40p	20p
2102	47p	15p
2107	8p2	27p
2114	390p	X
2115	5p6	22p
2116	2p2 NPO	2p2 N750
5101	115 nH	70 nH
5102	96 nH	60 nH
9101	X	✓

ALIGNMENT

SK...	FREQUENCY	I/P	VARICON	ADJUST	O/P	SCOPE/METER

AM - IF

MW *	468kHz via 10nF	A	min.	5110 5109	1	▲ | ▼ max.

AM - RF

MW * 520 - 1605kHz	512kHz 1635kHz 550kHz 1500kHz	B	max. min. Tune Tune	5108 C4 5113 C3	1	▲ | ▼ max.
LW * 148.5 - 283.5kHz	147kHz 291kHz 155kHz 270kHz		max. min. Tune Tune	5107 2123 5114 2108		

FM - RF

FM 87.5-108MHz (64.7-108.5MHz)	87.35MHz @ (64.7MHz)	C	max.	5102	1	▲ | ▼ max.
	108.25MHz @ (108.5MHz)		min.	C2		
	88MHz @ (68MHz)		Tune	5101		
	106MHz @		Tune	C1		

* Mod. 400Hz 30% ( ) For extended FM @ ± 0.15MHz

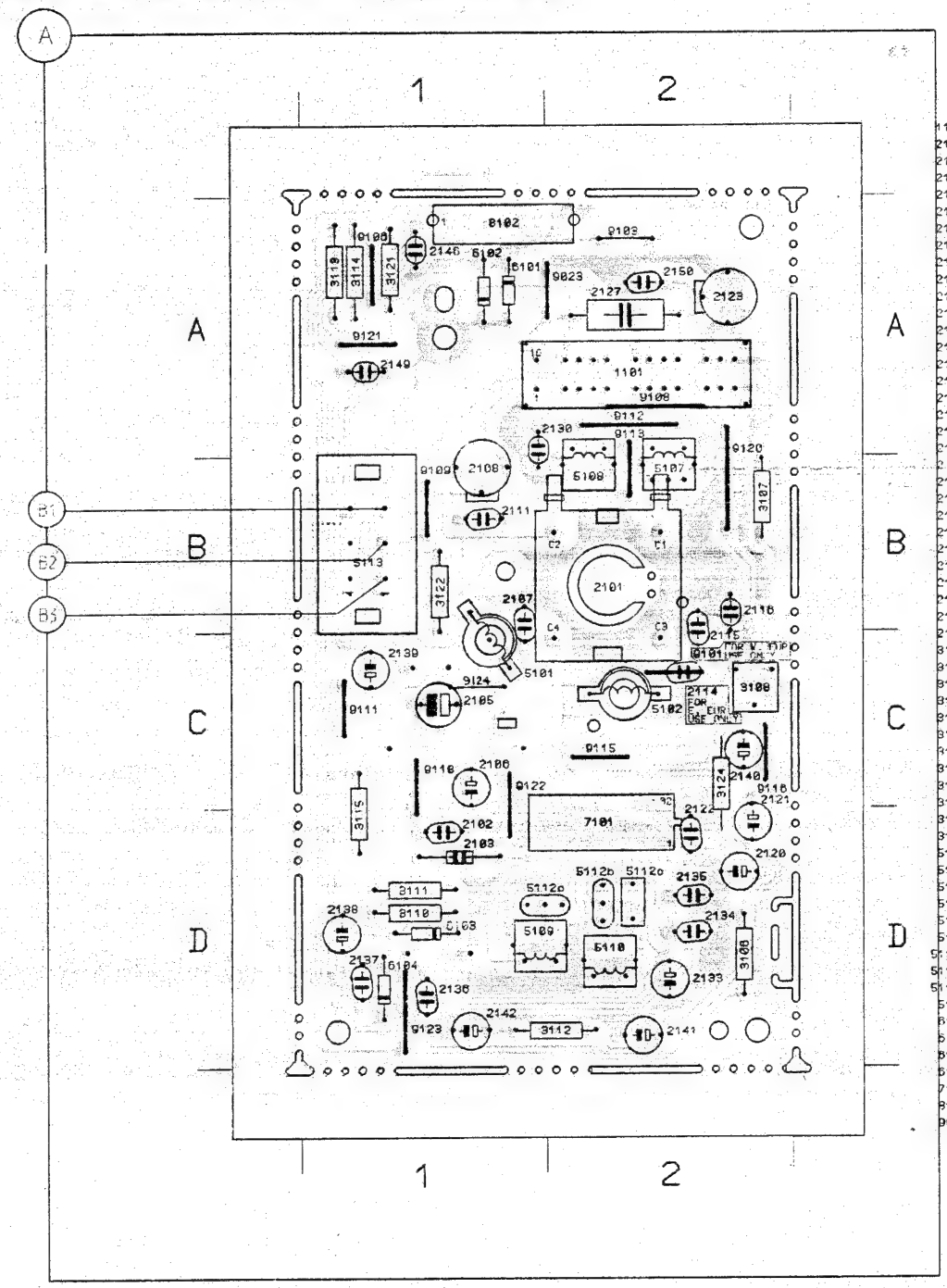
STEREO DECODER

SK...	FREQUENCY	I/P	VARICON	ADJUST	O/P	SCOPE/METER
FM STEREO	98MHz $	C	Tune	3108	D	▲ | ▼ 152±0.1kHz

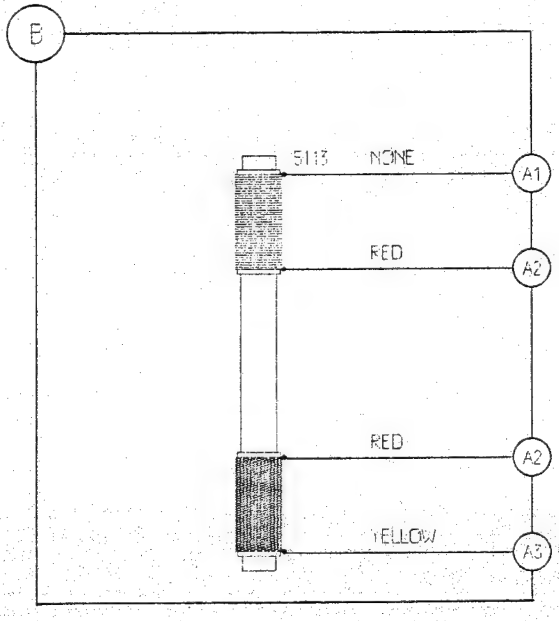
$ Without Pilot

Repeat ▲ | ▼

TUNER COMPONENT LAYOUT - FM/LW/MW



1101	A 2	9101	C 2
2101	B 2	9103	A 2
2102	D 1	9105	A 1
2103	D 1	9108	A 2
2105	C 1	9109	B 1
2106	C 1	9111	C 1
2107	B 1	9112	A 2
2108	B 1	9113	B 2
2111	B 1	9115	C 2
2114	C 2	9116	C 2
2115	B 2	9118	C 1
2116	B 2	9120	B 2
2120	D 2	9121	A 1
2121	D 2	9122	C 1
2122	D 2	9123	D 1
2123	A 2	9124	C 1
2127	A 2		
2130	A 1		
2133	D 2		
2134	D 2		
2135	D 2		
2136	D 1		
2137	D 1		
2138	D 1		
2139	C 1		
2140	C 2		
2141	D 2		
2142	D 1		
2146	A 1		
2149	A 1		
2150	A 2		
3106	D 2		
3107	B 2		
3108	C 2		
3110	D 1		
3111	D 1		
3112	D 2		
3113	A 1		
3114	A 1		
3115	D 1		
3121	A 1		
3122	B 1		
3124	C 2		
5101	B 1		
5102	C 2		
5107	B 2		
5108	B 2		
5110	D 2		
5111	D 1		
5112c	D 1		
5112b	D 2		
5112c	D 2		
5113	B 1		
6101	A 1		
6102	A 1		
6103	D 1		
6104	D 1		
7101	D 2		
8102	A 1		
9023	A 2		



ALIGNMENT

SK...	FREQUENCY	I/P	VARICON	ADJUST	O/P	SCOPE/METER
AM - IF						
MW *	468kHz via 10nF	A	min.	5110 5109	1	▲ | ▼ max.
AM - RF						
MW * 530 - 1710kHz	512kHz 1635kHz 550kHz 1500kHz	B	max. min. Tune Tune	5108 C4 5113 C3	1	▲ | ▼ max.
FM - RF						
FM 87.5-108MHz	87.35MHz @	C	max.	5102	1	▲ | ▼ max.
	108.25MHz @		min.	C2		
	88MHz @		Tune	5101		
	106MHz @		Tune	C1		

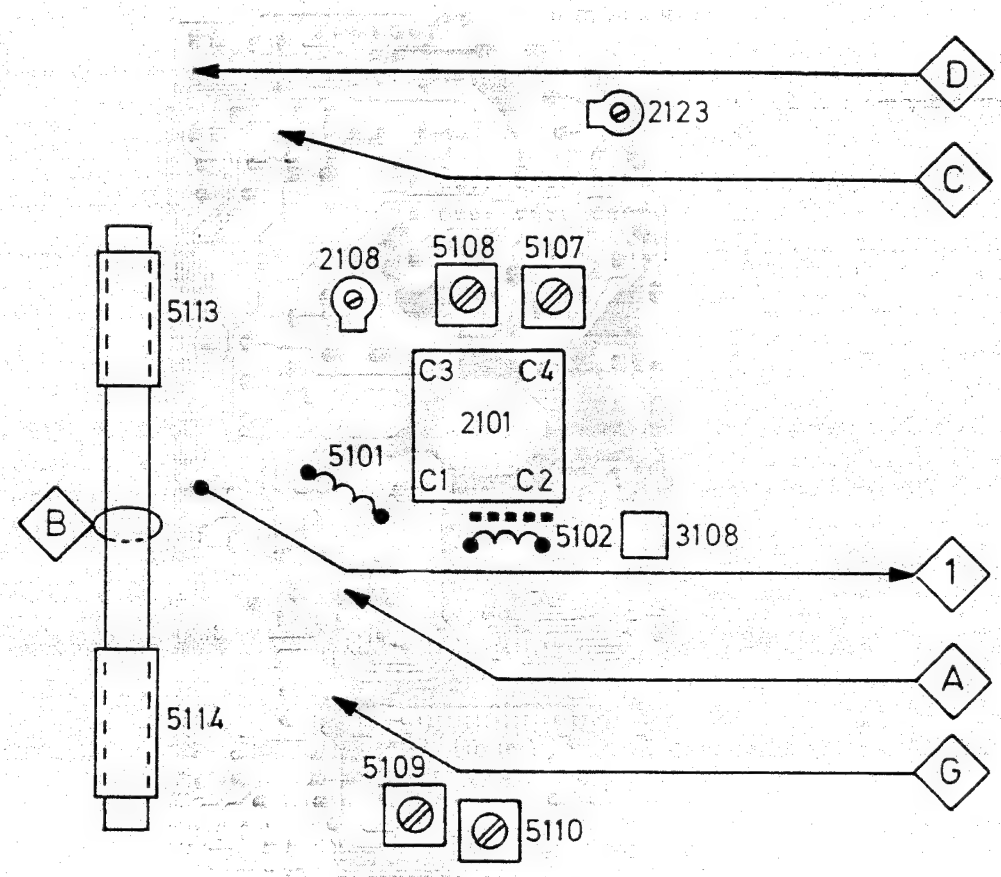
* Mod. 400Hz 30% @ ± 0.15MHz

STEREO DECODER

SK...	FREQUENCY	I/P	VARICON	ADJUST	O/P	SCOPE/METER
FM STEREO	98MHz $	C	Tune	3108	D	▲ | ▼ 152±0.1kHz

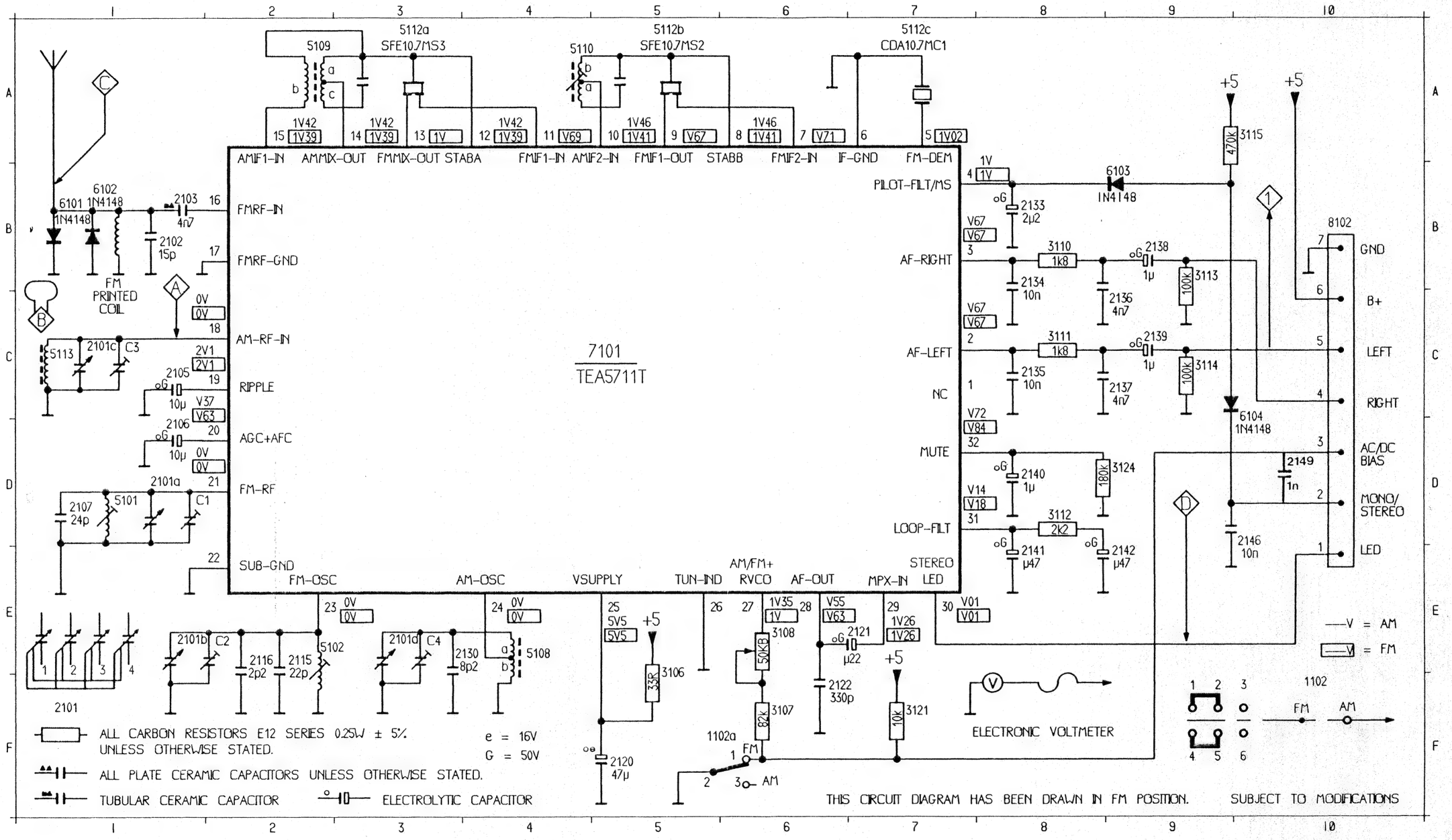
$ Without Pilot

Repeat ▲ \| ▼

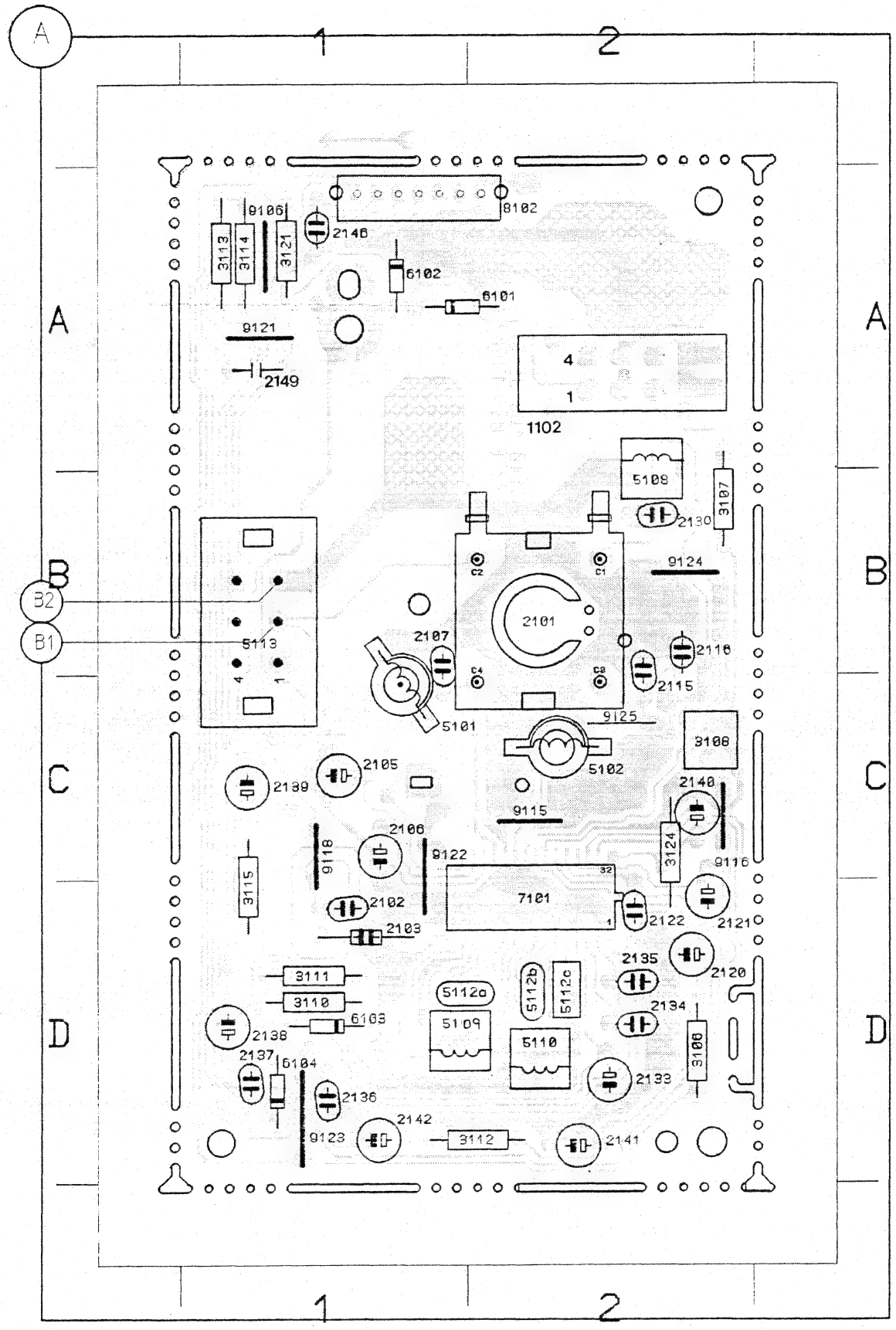

D
2123
C
2108
5108
5107
5113
C3
C4
2101
C1
C2
5101
B
5102
3108
1
A
5114
G
5109
5110

TUNER CIRCUIT DIAGRAM - FM/MW

1102a F 6	2101d E 3	2106 D 1	2120 F 5	2133 B 8	2137 C 9	2141 E 8	3107 F 6	3112 D 8	3121 F 7	5102 E 2	5112a A 3	6101 B 1	7101 C 4
2101a D 1	2102 B 1	2107 D 1	2121 E 7	2134 B 8	2138 B 9	2142 E 9	3108 E 6	3113 B 9	3124 D 9	5108 E 4	5112b A 5	6102 B 1	8102 B10
2101b E 1	2103 B 1	2115 E 2	2122 F 6	2135 C 8	2139 C 9	2146 D10	3110 B 8	3114 C 9		5109 A 2	5112c A 7	6103 B 9	
2101c C 1	2105 C 1	2116 E 2	2130 E 4	2136 C 9	2140 D 8	3106 F 5	3111 C 8	3115 A10	5101 D 1	5110 A 5	5113 C 1	6104 D10	

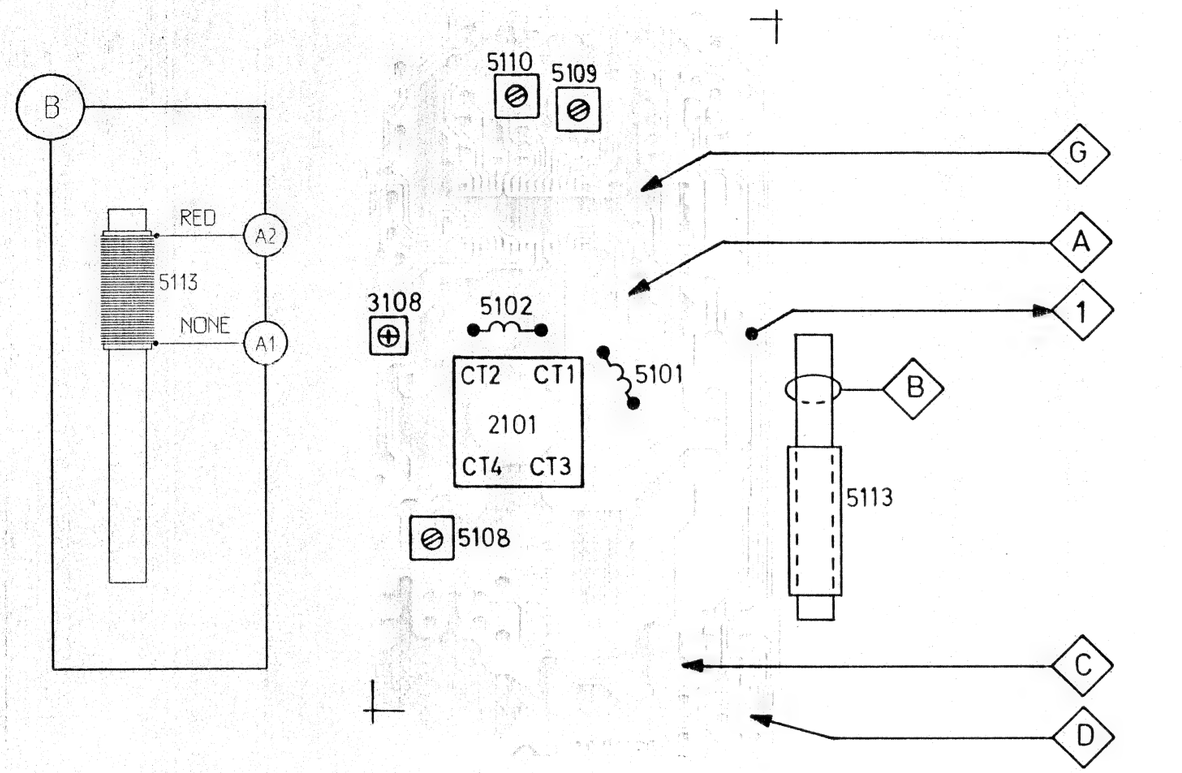


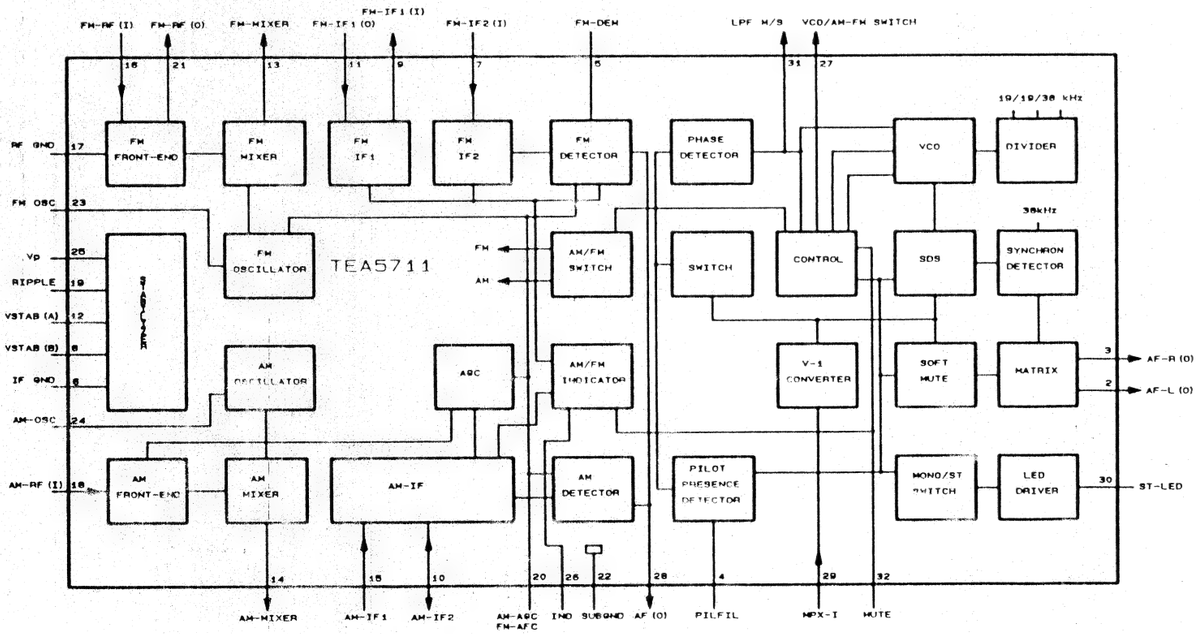
TUNER COMPONENT LAYOUT - FM/MW



1103 A 2
2101 B 2
2102 D 1
2103 D 1
2105 C 1
2106 C 1
2107 B 1
2111 B 2
2115 B 2
2116 B 2
2120 D 2
2121 D 2
2122 D 2
2133 D 2
2134 D 2
2135 D 2
2136 D 1
2137 D 1
2138 D 1
2139 C 1
2140 C 2
2141 D 2
2142 D 1
2146 A 1
3106 D 2
3107 B 2
3108 C 2
3110 D 1
3111 D 1
3112 D 2
3113 A 1
3114 A 1
3115 D 1
3121 A 1
3124 C 2
5101 B 1
5102 C 2
5108 B 2
5110 D 2
5111 D 1
5112a D 1
5112b D 2
5112c D 2
5113 B 1
6101 A 1
6102 A 1
6103 D 1
6104 D 1
7101 D 2
8102 A 1
9106 A 1
9115 C 2
9116 C 2
9118 C 1
9121 A 1
9122 C 1
9123 D 1
9124 B 2
9125 C 2

1103 A 2
2101 B 2
2102 D 1
2103 D 1
2105 C 1
2106 C 1
2107 B 1
2111 B 2
2115 B 2
2116 B 2
2120 D 2
2121 D 2
2122 D 2
2133 D 2
2134 D 2
2135 D 2
2136 D 1
2137 D 1
2138 D 1
2139 C 1
2140 C 2
2141 D 2
2142 D 1
2146 A 1
3106 D 2
3107 B 2
3108 C 2
3110 D 1
3111 D 1
3112 D 2
3113 A 1
3114 A 1
3115 D 1
3121 A 1
3124 C 2
5101 B 1
5102 C 2
5108 B 2
5110 D 2
5111 D 1
5112a D 1
5112b D 2
5112c D 2
5113 B 1
6101 A 1
6102 A 1
6103 D 1
6104 D 1
7101 D 2
8102 A 1
9106 A 1
9115 C 2
9116 C 2
9118 C 1
9121 A 1
9122 C 1
9123 D 1
9124 B 2
9125 C 2



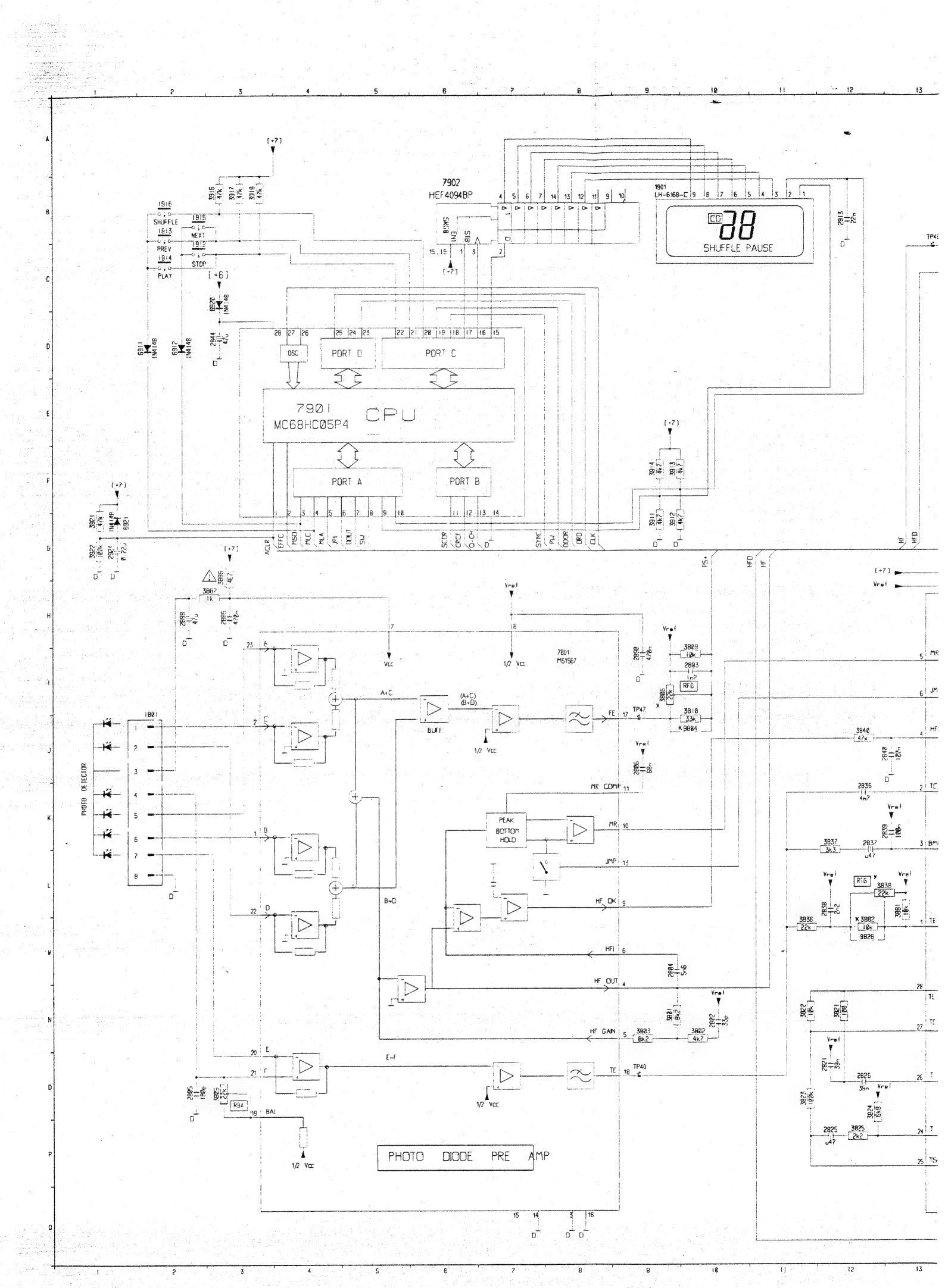


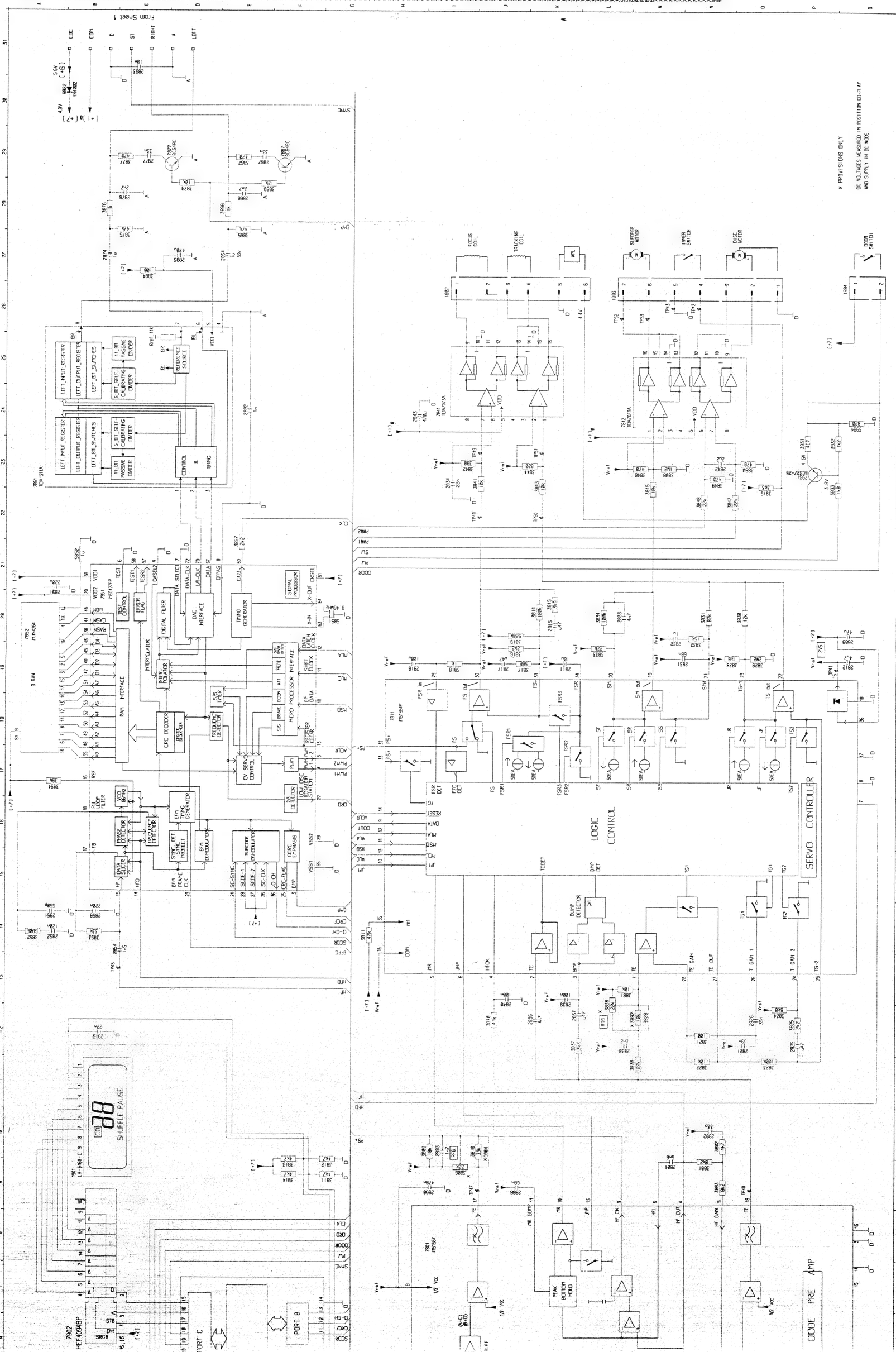
IC SPECIFICATION

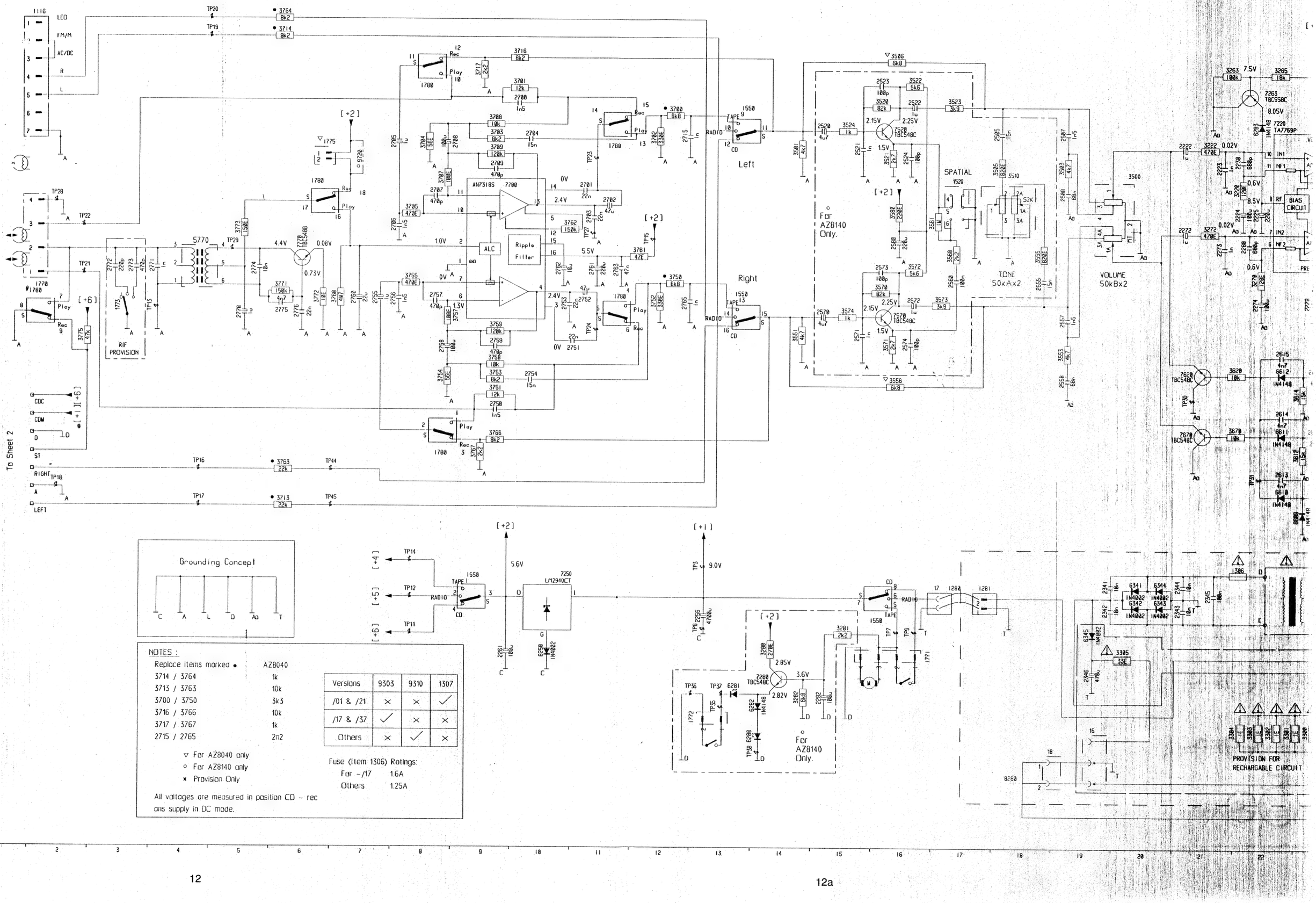
IC SPECIFICATION

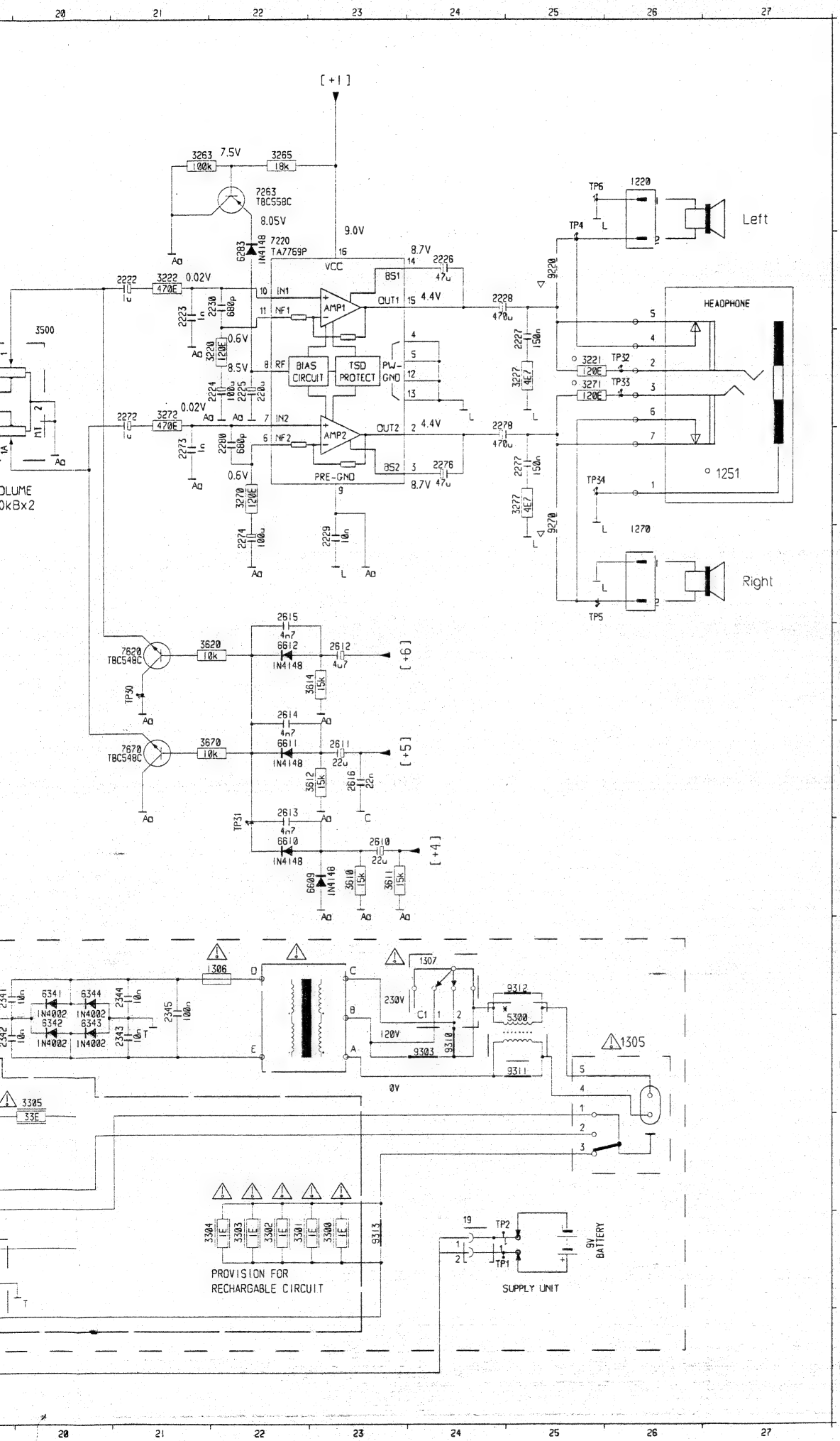
TEA5711(T) - AM/FM Stero Radio Circuit

SYMBOL	PIN	DESCRIPTION
NC	1	not connected
AF-Lo	2	left channel audio output (output imp. = 5kΩ)
AF-Ro	3	right channel audio output (output imp. = 5kΩ)
PILFIL	4	pilot detector filter pin
FM-DEM	5	ceramic discriminator pin
IFGND	6	ground of IF, detector and MPX stages
FM-IF2I	7	second FM-IF input (input imp. = 330Ω)
VSTABB	8	stabilized internal supply voltage (B)
FM-IF1O	9	first FM-IF output (output imp. = 330Ω)
AM-IF2VO	10	input/output to IFT; output: current source
FM-IF1I	11	first FM-IF input (input imp. = 330Ω)
VSTABA	12	stabilized internal supply voltage (A)
FM-MIXER	13	output to ceramic IF filter (output imp. = 330Ω)
AM-MIXER	14	open-collector output to IFT
AM-IF1I	15	input from IFT or ceramic filter (input imp. = 3kΩ)
FM-RFI	16	FM-RF aerial input (input imp. = 3kΩ)
RFGND	17	FM-RF ground
AM-RFI	18	parallel tuned AM aerial circuit to ground (total input capacitance = 3pF)
RIPPLE	19	ripple capacitor pin
AM-AGC/FM-AFC	20	AGC/AFC capacitor pin
FM-RFO	21	parallel tuned FM-RFcircuit to ground
SUBGND	22	substrate and RF ground
FM-OSC	23	parallel tuned FM-OSC circuit to ground
AM-OSC	24	parallel tuned AM-OSC circuit to ground
Vp	25	positive supply voltage
IND	26	signal level output
VCO/AM-FM SWITCH	27	VCO and switch terminal : open for AM ; ground for FM
AFO	28	AM/FM AF output (output imp. = 5kΩ)
MPXI	29	input for stereo decoder (input imp. = 150kΩ)
ST - LED	30	stereo indicator
LPF M/S	31	pin for loopfilter and mono/stereo switch
MUTE	32	mute pin


7902
HEF4094BP
1901
LH-6168-C
CD
28
SHUFFLE PAUSE
SHUFFLE
NEXT
PREV
STOP
PLAY
7901
MC68HC05P4
CPU
OSC
PORT D
PORT C
PORT A
PORT B
7801
M51567
PHOTO DETECTOR
1801
PEAK
BOTTOM
HOLD
BUFF
A+C
B+D
E+F
(A+C)
(B+D)
MR COMP
MR
JMP
HF OK
HFI
HF OUT
HF GAIN
FE
TE
BAL
Vcc
1/2 Vcc
Vref
PHOTO DIODE PRE AMP


from Sheet 1
CDC
COM
D
ST
RIGHT
A
LEFT
5.6V
4.9V
SYNC
LOGIC CONTROL
SERVO CONTROLLER
DIODE PRE AMP
FOCUS COIL
TRACKING COIL
SLEDGE MOTOR
INNER SWITCH
DISC MOTOR
DOOR SWITCH
SHUFFLE PAUSE
PORT B
PORT C
* PROVISIONS ONLY
DC VOLTAGES MEASURED IN POSITION CD-PLAY AND SUPPLY IN DC MODE


To Sheet 2
LEO
FM/M
AC/DC
R
L
CDC
CDM
ST
RIGHT
LEFT
RIF PROVISION
AN7318S
ALC
Ripple Filter
Left
Right
For AZ8140 Only.
SPATIAL
TONE 50kAx2
VOLUME 50kBx2
BIAS CIRCUIT
PROVISION FOR RECHARGABLE CIRCUIT
Grounding Concept
C A L D Ao T
NOTES :
Replace items marked • AZ8040
3714 / 3764 1k
3713 / 3763 10k
3700 / 3750 3k3
3716 / 3766 10k
3717 / 3767 1k
2715 / 2765 2n2
▽ For AZ8040 only
○ For AZ8140 only
✱ Provision Only
All voltages are measured in position CD – rec ans supply in DC mode.
Versions 9303 9310 1307
/01 & /21 × × ✓
/17 & /37 ✓ × ×
Others × ✓ ×
Fuse (Item 1306) Ratings:
For -/17 1.6A
Others 1.25A



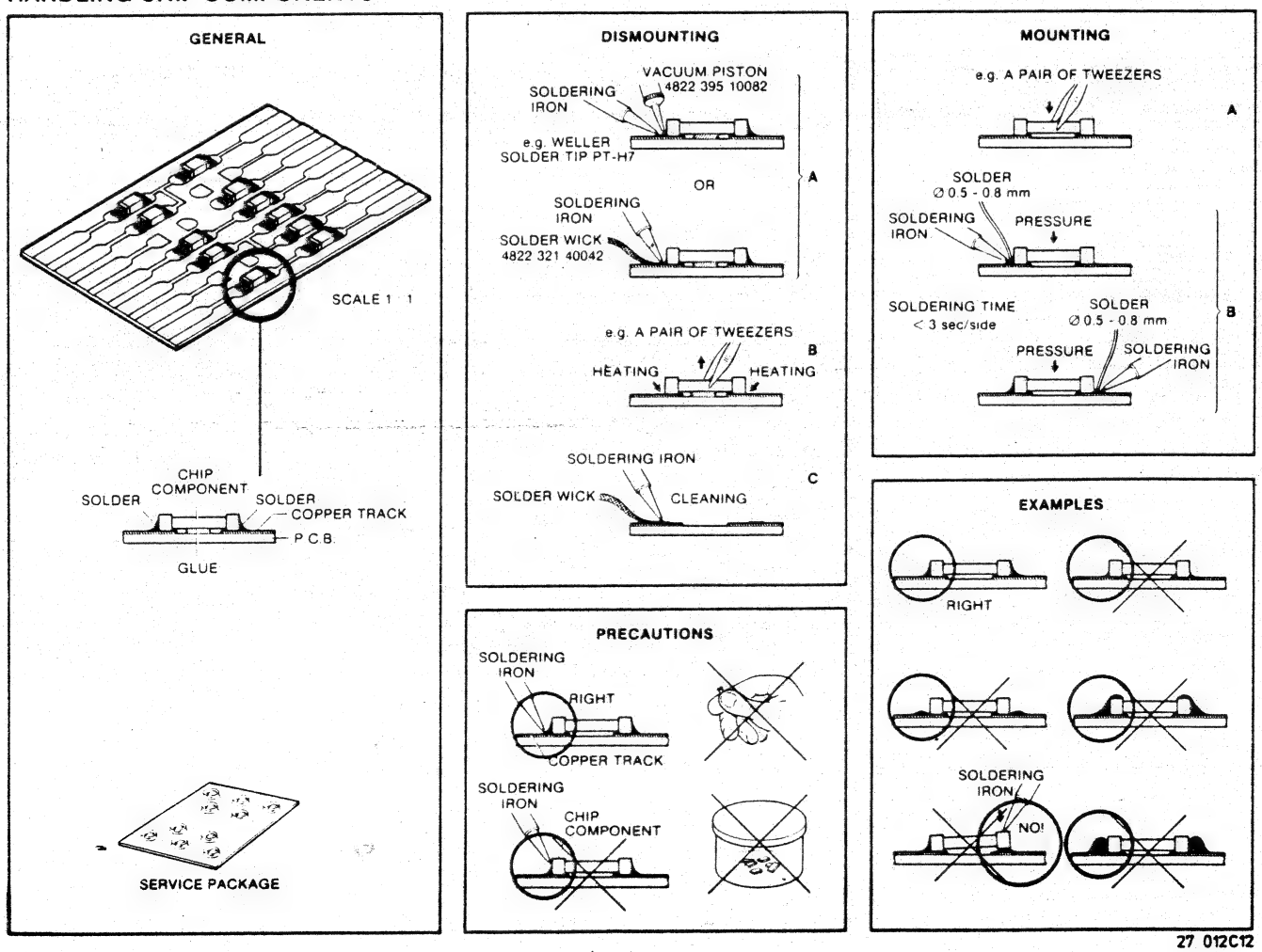
	1116	A 2	3610	I23
	1220	B26	3611	I23
	1251	E27	3612	H23
	1270	F26	3614	G23
	1281	J17	3620	G22
	1305	K26	3670	H22
A	1306	J22	3700	B12
	1307	J24	3701	B10
	1520	D17	3702	C12
	1550	J 9	3703	C 9
	1550	K15	3704	C 8
	1550	B14	3705	D 8
	1550	E13	3707	D 8
	16	W19	3708	C 9
	17	J17	3709	C 9
	1770	E 2	3713	I 6
	1771	K16	3714	A 6
B	1772	L13	3716	A10
	1773	F 3	3717	B 9
	1775	C 7	3750	E12
	1780	H 8	3751	G 9
	1780	E11	3752	F12
	1780	E 2	3753	G 9
	1780	B 8	3754	G 8
	1780	C11	3755	E 8
	1780	D 6	3757	F 9
	18	W19	3758	G 9
	19	W24	3759	F 9
C	2222	C21	3760	F 7
	2223	C21	3761	E12
	2224	D22	3762	D10
	2225	D22	3763	H 6
	2226	C24	3764	A 6
	2227	D25	3766	H 9
	2228	C24	3767	H 9
	2229	F23	3771	E 6
	2230	C22	3772	F 6
	2256	K13	3773	D 5
	2261	K 9	3775	F 2
D	2272	D21	5300	K25
	2273	E21	5770	E 4
	2274	E22	6250	K10
	2276	E24	6280	W14
	2277	E25	6281	L13
	2278	E24	6282	L14
	2280	E22	6283	C22
	2282	L15	6341	J20
	2341	J19	6342	K20
	2342	K19	6343	K20
E	2343	K21	6344	J20
	2344	J21	6345	K19
	2345	J21	6609	I23
	2346	L19	6610	I22
	2505	F19	6611	H22
	2507	C19	6612	G22
	2508	D19	7220	C22
	2520	C15	7250	J11
	2521	C15	7263	B22
	2522	B16	7280	L14
	2523	B16	7520	C16
F	2524	C16	7570	F16
	2555	E18	7620	G21
	2557	F19	7670	H21
	2558	G19	7700	D 9
	2560	E17	7770	E 6
	2570	F15	9220	C25
	2571	F15	9270	E25
	2572	F16	9303	K24
	2573	E16	9310	K24
	2574	F16	9311	K25
	2580	E16	9312	J25
G	2610	I23	9313	W23
	2611	H23	9720	C 7
	2612	D23		
	2613	H22		
	2614	D22		
	2615	F22		
	2616	H23		
	2700	B10		
	2701	D11		
	2702	D11		
H	2703	D11		
	2704	C10		
	2705	C 8		
	2706	D 8		
	2707	D 9		
	2708	C 8		
	2709	C 9		
	2715	C12		
	2750	G 9		
	2751	F11		
	2752	F11		
I	2753	F10		
	2754	G10		
	2755	F 7		
	2756	F 8		
	2757	F 8		
	2758	F 8		
	2759	F 9		
	2760	F 7		
	2761	E11		
	2762	E10		
	2763	E11		
J	2765	F12		
	2770	F 5		
	2771	E 4		
	2772	E 3		
	2773	E 3		
	2774	E 5		
	2775	F 6		
	2776	F 6		
	3220	D22		
	3221	D25		
K	3222	C21		
	3227	D25		
	3263	B21		
	3265	B22		
	3270	E22		
	3271	D25		
	3272	D21		
	3277	E25		
	3280	K14		
	3281	K15		
	3282	L14		
L	3300	W23		
	3301	W22		
	3302	W22		
	3303	W22		
	3304	W22		
	3305	K20		
	3500	D20		
	3501	C14		
	3503	C19		
	3505	C18		
	3506	B16		
M	3510	C18		
	3520	B16		
	3521	C16		
	3522	B16		
	3523	B17		
	3524	C15		
	3551	F14		
	3553	F19		
	3555	E18		
	3556	B16		
	3560	C17		
N	3561	D16		
	3570	E16		
	3571	F16		
	3572	E16		
	3573	F17		
	3574	F15		
	3580	D16		

CD ALIGNMENT

ADJUSTMENT TABLE (RCD1.2D)

CD-PART	◇	↻	⊓
LASER CURRENT			
The APC (Automatic Power Control) for the laser diode is located on the disc drive and has been adjusted in the production line. Therefore for service purpose it is not intended to adjust the laser current.			
TRACKING BALANCE			
Service mode Step 2 Display shows ⊏	TP40 & TP41	3805	Adjust to 0V DC offset

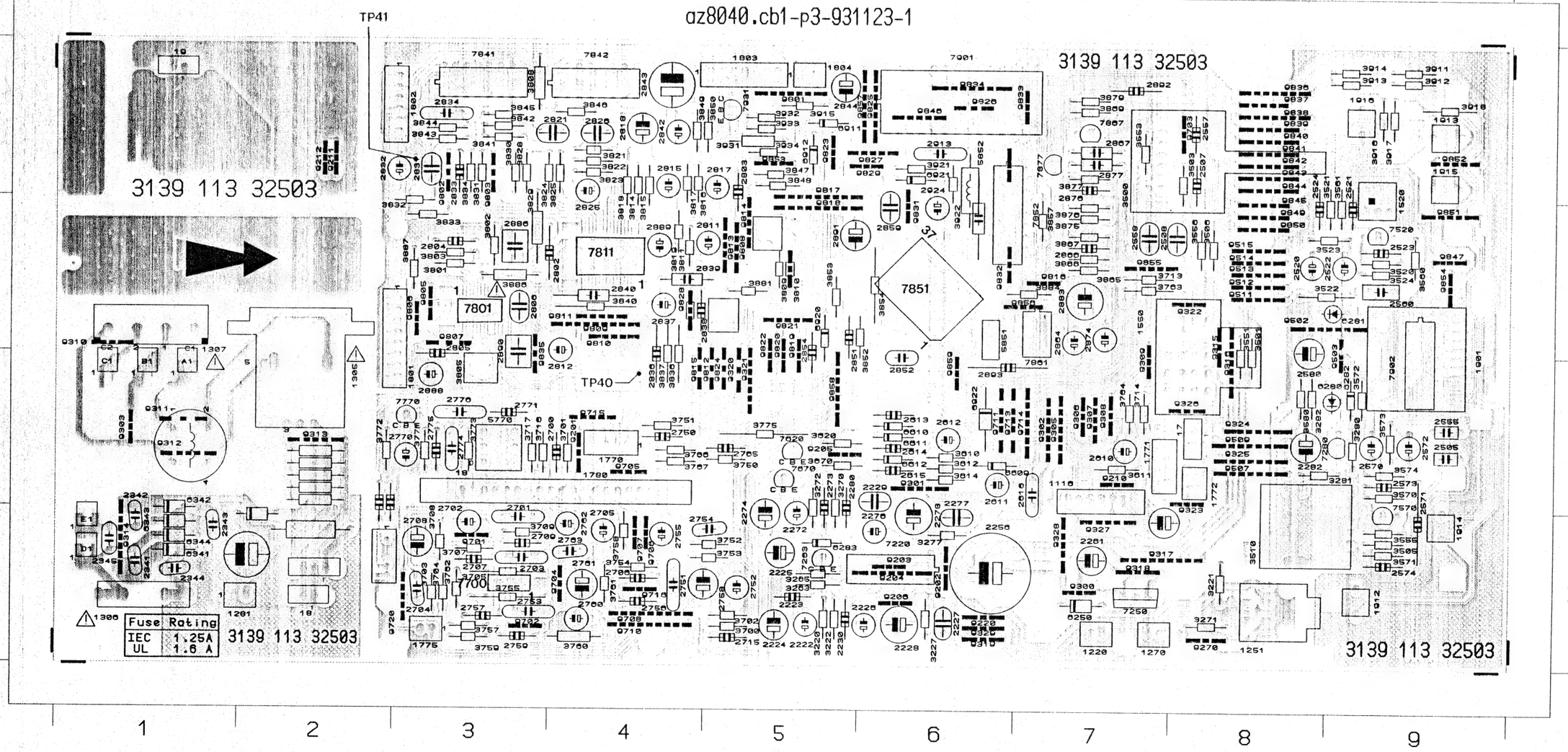
HANDLING CHIP COMPONENTS

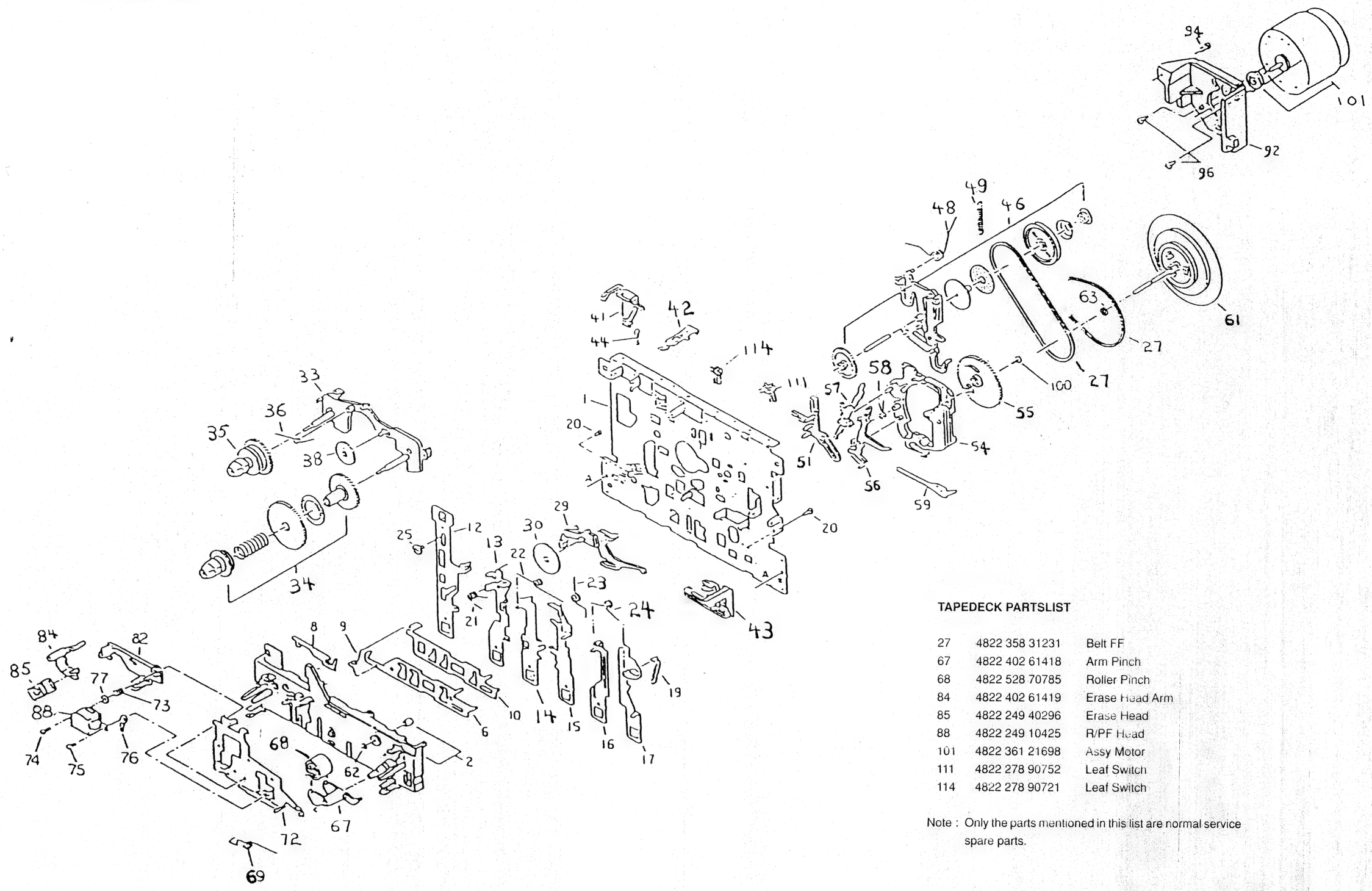


27 012C12

COMBI BOARD COMPONENT LAYOUT

16 D 2	1901 B 9	2280 C 5	2574 D 9	2754 D 5	2812 B 4	2866 B 7	3272 C 5	3555 D 9	3709 D 3	3775 C 5	3831 A 3	3867 B 7	3934 A 5	7220 D 6	9203 D 6	9316 C 8	9702 D 3	9811 B 4	9835 C 3	A1 C 1	TP20 C 7	TP47 B 5
17 C 8	1912 D 9	2282 C 8	2580 B 8	2755 D 4	2815 A 4	2867 A 7	3277 D 6	3556 B 8	3713 B 7	3801 B 3	3832 B 3	3869 A 7	5300 C 1	7250 D 7	9204 D 6	9317 D 7	9703 A 8	9812 C 4	9836 A 8	B1 C 1	TP21 C 4	TP48 A 4
18 D 2	1913 A 9	2341 D 1	2610 C 7	2756 D 4	2817 A 5	2874 B 7	3280 C 9	3560 B 9	3714 C 7	3802 B 3	3833 B 3	3875 B 7	5770 C 3	7263 D 5	9205 C 5	9318 D 7	9704 D 4	9813 B 5	9837 A 8	C1 C 1	TP22 C 4	TP49 A 3
19 A 1	1914 D 9	2342 D 1	2611 C 6	2757 D 3	2818 A 4	2876 A 7	3281 C 8	3561 B 9	3716 C 3	3803 B 3	3834 A 3	3876 B 7	5851 B 6	7280 C 9	9206 D 6	9319 D 6	9705 C 4	9814 B 5	9838 A 8	D1 D 1	TP23 D 3	TP50 A 3
1116 C 7	1915 A 9	2343 D 1	2612 C 6	2758 D 4	2821 A 4	2877 A 7	3282 C 8	3570 C 9	3717 C 3	3805 C 3	3836 C 4	3877 A 7	5852 A 6	7520 B 9	9210 C 7	9320 C 5	9706 D 4	9815 C 5	9839 A 8	E1 D 1	TP24 D 5	TP51 A 3
1220 D 7	1916 A 9	2344 D 1	2613 C 6	2759 D 3	2825 A 4	2883 B 7	3300 C 2	3571 D 9	3750 C 5	3806 B 5	3837 C 4	3879 A 7	6250 D 7	7570 D 9	9211 A 2	9321 C 5	9707 D 4	9816 B 7	9840 A 8	TP1 A 2	TP27 D 3	TP52 A 4
1251 D 8	2222 D 5	2345 D 1	2614 C 6	2760 D 4	2826 A 4	2886 B 3	3301 C 2	3572 C 9	3751 C 4	3808 A 3	3838 B 5	3881 B 5	6280 C 9	7620 C 5	9212 A 2	9322 B 8	9708 D 4	9817 A 5	9841 A 8	TP2 A 1	TP28 C 4	TP53 A 5
1270 D 7	2223 D 5	2346 D 2	2615 C 6	2761 D 4	2831 A 3	2888 C 3	3302 C 2	3573 C 9	3752 D 5	3809 B 5	3840 B 4	3882 B 4	6281 B 9	7670 C 5	9220 D 6	9323 C 8	9710 D 4	9818 B 5	9842 A 8	TP3 D 7	TP29 C 3	conA D 6
1281 D 2	2224 D 5	2505 C 9	2616 C 7	2762 D 4	2832 A 3	2889 B 4	3303 C 2	3574 C 9	3753 D 5	3810 B 5	3841 A 3	3884 B 7	6282 C 9	7700 D 3	9270 D 8	9324 C 8	9711 C 6	9819 C 5	9843 A 8	TP4 D 8	TP30 D 5	conAo D 6
1305 C 2	2225 D 5	2507 A 8	2700 C 4	2763 D 4	2833 A 3	2890 B 3	3304 C 2	3580 C 8	3754 D 4	3811 B 4	3842 A 3	3886 B 3	6283 D 5	7770 C 3	9300 D 7	9325 C 8	9713 C 6	9820 C 5	9844 A 8	TP5 D 8	TP31 C 6	conD D 6
1306 D 1	2226 D 6	2508 B 8	2701 D 3	2765 C 5	2834 A 3	2891 B 5	3305 D 2	3610 C 6	3755 D 3	3814 A 4	3843 A 3	3887 B 3	6341 D 1	7801 B 3	9301 C 6	9326 C 8	9714 C 7	9821 B 5	9845 B 8	TP6 D 6	TP32 D 8	conL D 6
1307 B 1	2227 D 6	2520 B 8	2702 D 3	2770 C 3	2836 C 4	2892 A 7	3306 C 6	3611 C 7	3757 D 3	3815 A 4	3844 A 3	3911 A 9	6342 D 1	7811 B 4	9302 C 7	9327 D 7	9715 C 4	9822 C 5	9846 A 6	TP7 C 7	TP33 D 8	conT D 6
1520 A 9	2228 D 6	2521 B 9	2703 D 3	2771 C 3	2837 B 4	2893 C 6	3501 C 8	3612 C 6	3758 D 4	3816 A 4	3845 A 3	3912 A 9	6343 D 1	7841 A 3	9303 C 1	9328 D 7	9716 D 4	9823 A 5	9847 B 9	TP8 D 7	TP34 D 8	1280 D 8
1550 C 8	2229 C 6	2522 B 9	2704 D 3	2772 C 2	2838 B 4	2894 B 6	3503 A 8	3614 C 6	3759 D 3	3817 A 4	3846 A 4	3913 A 9	6344 D 1	7842 A 4	9305 C 7	9329 D 6	9720 D 3	9824 C 5	9848 B 8	TP9 C 8	TP35 C 8	8280 D 2
1770 C 4	2230 D 5	2523 B 9	2705 D 4	2773 C 2	2839 B 4	2913 A 6	3505 D 9	3620 C 5	3760 D 4	3818 A 4	3847 A 5	3914 A 9	6345 D 2	7851 B 6	9306 C 7	9502 B 9	9801 A 5	9825 A 6	9850 B 8	TP10 C 7	TP36 D 8	
1771 C 7	2256 D 6	2524 B 8	2706 D 4	2774 C 3	2840 B 4	2924 B 6	3506 B 8	3670 C 5	3761 D 4	3819 B 4	3848 A 5	3915 A 5	6609 C 6	7852 B 6	9307 C 7	9503 B 9	9802 A 3	9826 A 6	9851 B 9	TP11 B 7	TP37 B 8	
1772 C 8	2260 D 7	2555 C 9	2707 D 3	2775 C 3	2842 A 4	3220 D 5	3510 D 8	3700 D 5	3762 D 3	3821 A 4	3849 A 4	3916 A 9	6610 C 6	7861 B 7	9308 C 7	9507 C 8	9803 A 3	9827 A 6	9852 A 9	TP12 D 7	TP38 C 8	
1773 D 2	2261 D 7	2557 A 8	2708 D 3	2776 C 3	2843 A 4	3221 D 8	3520 B 9	3701 C 4	3763 B 7	3822 A 4	3850 A 5	3917 A 9	6611 C 6	7867 A 7	9309 C 7	9509 C 8	9804 B 5	9828 B 4	9853 A 5	TP13 C 3	TP40 C 4	
1775 D 3	2272 D 5	2558 B 7	2709 D 3	2802 B 3	2844 A 5	3222 D 5	3521 B 9	3702 D 5	3764 C 7	3823 A 4	3852 B 5	3918 A 9	6612 C 6	7877 A 7	9310 B 1	9511 B 8	9805 B 3	9829 A 6	9854 B 9	TP14 C 7	TP41 A 3	
1780 C 4	2273 C 5	2560 B 9	2715 D 5	2803 A 5	2851 B 5	3227 D 6	3522 B 8	3703 D 3	3766 C 4	3824 A 3	3853 B 5	3921 A 6	6911 A 5	7901 A 6	9311 C 1	9512 B 8	9806 B 3	9830 A 6	9855 B 7	TP15 D 7	TP42 A 5	
1801 B 3	2274 D 5	2570 C 9	2750 C 4	2804 B 3	2852 C 6	3263 D 5	3523 B 8	3704 D 3	3767 C 4	3825 A 4	3854 B 6	3922 A 6	6912 A 5	7902 C 9	9312 C 1	9513 B 8	9807 B 3	9831 B 6	9856 B 7	TP16 B 7	TP43 A 4	
1802 A 3	2276 D 6	2571 D 9	2751 D 4	2805 C 3	2854 B 5	3265 D 5	3524 B 9	3705 D 3	3771 C 3	3828 A 3	3857 B 7	3931 A 5	6920 B 5	7931 A 5	9313 C 2	9514 B 8	9808 B 5	9832 B 6	9857 A 6	TP17 B 7	TP44 B 8	
1803 A 5	2277 D 6	2572 C 9	2752 D 5	2806 B 3	2859 B 6	3270 C 5	3551 C 8	3707 D 3	3772 C 2	3829 B 3	3865 B 7	3932 A 5	6921 A 6	9201 C 4	9314 D 1	9515 B 8	9809 B 4	9833 A 7	9858 C 5	TP18 B 7	TP45 B 8	
1804 A 5	2278 D 6	2573 C 9	2753 D 3	2811 B 5	2864 B 7	3271 D 8	3553 A 7	3708 D 3	3773 C 3	3830 A 3	3866 B 7	3933 A 5	6922 C 6	9202 D 6	9315 B 8	9701 D 3	9810 B 4	9834 A 6	9859 C 6	TP19 D 7	TP46 C 4	



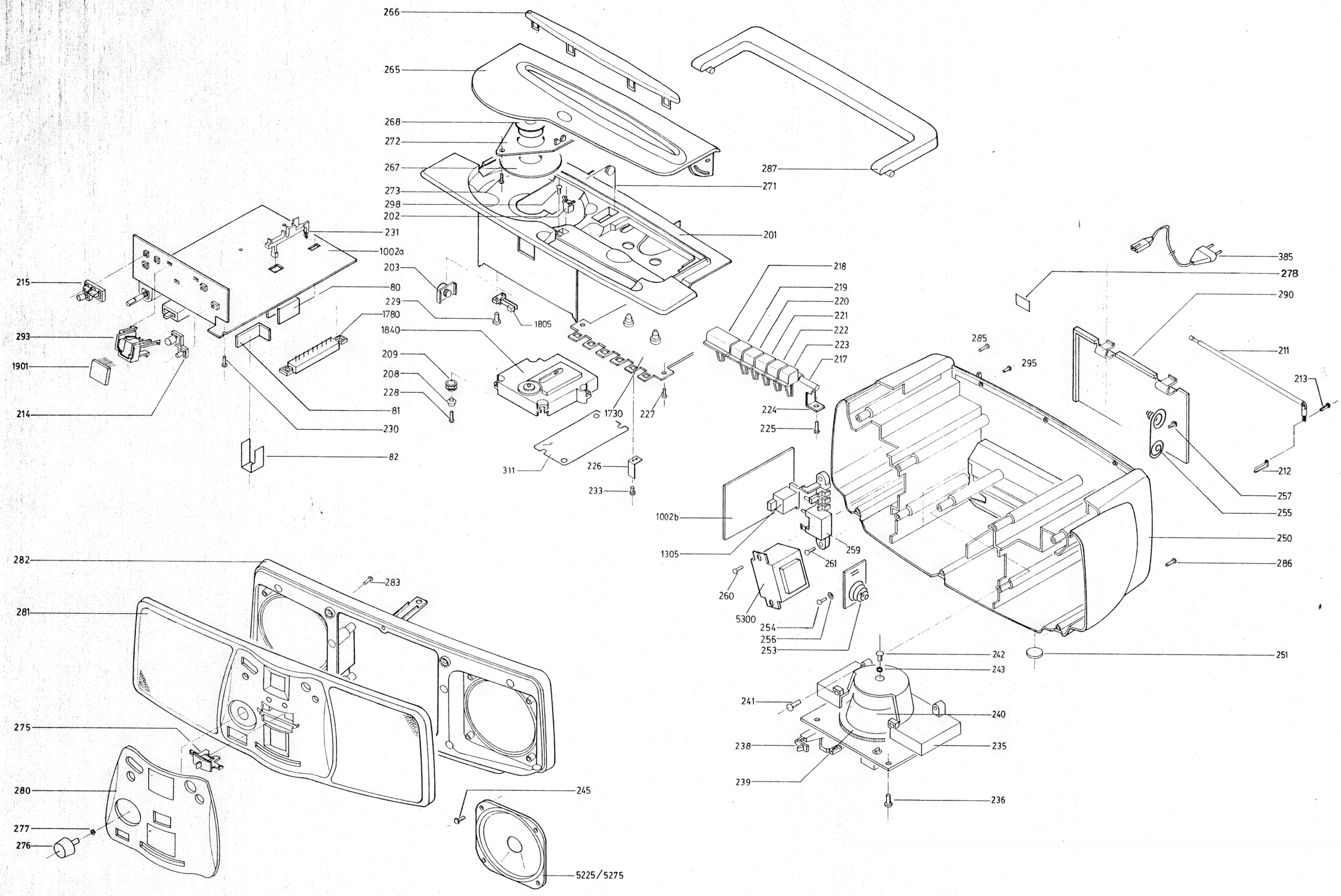


TAPEDECK PARTSLIST

27	4822 358 31231	Belt FF
67	4822 402 61418	Arm Pinch
68	4822 528 70785	Roller Pinch
84	4822 402 61419	Erase Head Arm
85	4822 249 40296	Erase Head
88	4822 249 10425	R/PF Head
101	4822 361 21698	Assy Motor
111	4822 278 90752	Leaf Switch
114	4822 278 90721	Leaf Switch

Note : Only the parts mentioned in this list are normal service spare parts.

SET EXPLODED VIEW



SET MECHANICAL PARTSLIST

202	4822 276 13079	Latch Switch
203	4822 529 10257	Damper Assy
208	4822 532 61104	Distance-Holder
209	4822 532 61103	Damper
211	4822 303 30298	Telescopic Aerial
214	4822 410 63014	Button Set CD 1
215	4822 410 63015	Button Set CD 2
218	4822 410 63016	Button Record
219	4822 410 63022	Button Play
220	4822 410 63017	Button REW
221	4822 410 63018	Button FWD
222	4822 410 63019	Button Stop
223	4822 410 63021	Button Pause
231	4822 403 30809	Bracket Record
238	4822 411 61955	Knob Band
240	4822 454 12921	Sticker Dialscale /00/05/20
240	4822 454 12928	Sticker Dialscale /37
240	4822 333 30228	Sticker Dialscale /21/41
250	4822 423 41252	Cabinet Rear
251	4822 462 40683	Plate (foot)
253	4822 492 52299	Spring-Battery
255	4822 492 51733	Spring Compression
259	4822 404 10881	Bracket Power
265	4822 443 64079	Door CD/Cass Assy
266	4822 450 62179	Lens Cass/CD
267	4822 535 60096	Disc
268	4822 532 51871	Pressure Ring Assy
271	4822 492 71463	Spring CD
275	4822 411 61956	Knob Mode
276	4822 413 51466	Knob Volume
277	4822 492 51374	Ring
278	4822 454 12932	Plate Voltage /21/41
280	4822 423 51163	Panel Front
280 *	4822 423 51167	Panel Front /21/41
280 *	4822 423 51169	Panel Front /37
281	4822 464 70628	Frame Loudspeaker
281	4822 464 70634	Frame Loudspeaker /21/41/37
287	4822 498 10505	Handle
290	4822 423 41251	Door Battery
293	4822 404 10882	Bracket LCD
385	4822 321 10831 ⚠	Mains Cord
385	4822 321 10918 ⚠	Main Cord /05
385	4822 321 10883 ⚠	Main Cord /37
	4822 736 21933	IFU
	4822 736 21967	IFU /21/41
	4822 736 22002	IFU /37

Note : Only the parts mentioned in this list are normal service spare parts.

* See Annex on Tuner Board Rework.

LIST OF SCREWS

213	PLASTITE TORX SCR ST ZN 3 X12
225	PLASTITE TORX SCR ST ZN 3 X16
227	PLASTITE TORX SCR ST ZN 3 X12
228	PLASTITE TORX SCR ST ZN 2 X16
229	PLASTITE TORX SCR ST ZN 2 X10
230	PLASTITE TORX SCR ST ZN 3 X12
236	PLASTITE TORX SCR ST ZN 3 X12
241	PLASTITE TORX SCR ST ZN 3 X16
242	TRUSS SCR M2.6X6X0.45P
243	LOCK WASH D2.8
245	PLAST TORX SCR ST ZN WASH 3X12
254	PLAST TORX SCR ST ZN WASH 3X12
257	PLAST TORX SCR ST ZN WASH 3X12
260	PLAST TORX SCR ST ZN WASH 3X16
261	PLAST TORX SCR ST ZN WASH 3X16
273	PLASTITE TORX SCR ST ZN 3 X12
283	PLASTITE TORX SCR ST ZN 3 X12
285	PLASTITE TORX SCR ST ZN 3 X25
286	PLASTITE TORX SCR ST ZN 3 X16
295	PLASTITE TORX SCR ST ZN 3 X16
298	PLASTITE TORX SCR ST ZN 3 X16

TUNER BOARD – FM/LW/MW

MISCELLANEOUS

1102	4822 277 21626	Switch Slide 6P3T

2101	4822 125 30027	Polyvaricon
2102	4822 126 12675	15pF 50V 5%
2103	4822 122 32764	4n7 20%
2105	4822 124 80678	10µF 50V 20%
2106	4822 124 80678	10µF 50V 20%
2107	4822 126 12304	27pF 50V 5%
2108	4822 125 50045	Trimmer 1P8-22P
2111	4822 126 12414	20pF 5%
2115	4822 122 32147	22pF 50V 5%
2116	4822 126 12809	2.2pF 50V 0.5%
2120	4822 124 40433	47µF 16V 20%
2121	4822 124 40746	0.22µF 63V 20%
2122	4822 126 12671	330pF 50V 10%
2123	4822 125 50062	Trimmer 1.4p-10pF 250V
2127	5322 121 54058	110pF 630V 1%
2130	4822 126 12337	3.9pF 50V 5%
2133	4822 124 22467	2.2µF 50V 20%
2134	4822 124 80141	10nF 50V 10%
2135	4822 124 80141	10nF 50V 10%
2136	4822 126 12672	4.7nF 50V 10%
2137	4822 126 12672	4.7nF 50V 10%
2138	4822 124 40246	4.7µF 63V 20%
2139	4822 124 40246	4.7µF 63V 20%
2140	4822 124 40242	1µF 63V 20%
2141	4822 124 40239	0.47µF 50V 20%
2142	4822 124 40239	0.47µF 50V 20%
2146	4822 124 80141	10nF 50V 10%
2149	4822 126 11183	1nF 50V 10%
2150	4822 126 13093	22pF 50V 5%

3106	4822 050 13309	33Ω 5%
3107	4822 050 18203	82K 5%
3108	4822 101 11259	Trimmer 50k
3110	4822 050 11802	1k8 5%
3111	4822 050 11802	1k8 5%
3112	4822 050 14702	4k7 5%
3113	4822 050 11004	100K 5%
3114	4822 050 11004	100K 5%
3115	4822 050 14704	470K 5%
3121	4822 050 11003	10K 5%
3122	4822 116 52182	15Ω 5%
3124	4822 116 52252	180K 5%

5101	4822 157 70513	Coil FM
5102	4822 156 30947	RF Coil 1.5 T
5107	4822 157 70144	Coil-M/O 270µH Green
5108	4822 157 70107	Coil-M/O 270µH Red
5109	4822 157 70499	IFT-AM 7MM WHT
5110	4822 156 11146	IFT-AM 7MM BLK
5112	4822 242 81154	Filter Kit 10.7MHz
5113	4822 158 60627	Bar-Coil Assy MW/LW

6101	4822 130 30621	1N4148
6102	4822 130 30621	1N4148
6103	4822 130 30621	1N4148
6104	4822 130 30621	1N4148

7101	4822 209 32746	TEA5711T/N2

Note: Only the parts mentioned in this list are normal service spare parts.

TUNER BOARD – FW/MW

MISCELLANEOUS

1102	4822 277 21587	SW-Slide 2P2T

2101	4822 125 30027	Polyvaricon
2102	4822 126 12675	15pF 50V 5%
2103	4822 122 32764	4n7 20%
2105	4822 124 80678	10µF 50V 20%
2106	4822 124 80678	10µF 50V 20%
2107	4822 126 12814	24pF 5%
2115	4822 122 32147	22pF 50V 5%
2116	4822 126 12809	2.2pF 50V 0.5%
2120	4822 124 40433	47µF 16V 20%
2121	4822 124 40746	0.22µF 63V 20%
2122	4822 126 12671	330pF 50V 10%
2130	4822 126 12229	8.2pF 50V 0.25%
2133	4822 124 22467	2.2µF 50V 20%
2134	4822 124 80141	10nF 50V 10%
2135	4822 124 80141	10nF 50V 10%
2136	4822 126 12672	4.7nF 50V 10%
2137	4822 126 12672	4.7nF 50V 10%
2138	4822 124 41398	1µF 63V 20%
2139	4822 124 41398	1µF 63V 20%
2140	4822 124 40242	1µF 50V 20%
2141	4822 124 40239	0.47µF 50V 20%
2142	4822 124 40239	0.47µF 50V 20%
2146	4822 124 80141	10nF 50V 10%
2149	4822 126 11183	1nF 50V 10%

3106	4822 050 13309	33Ω 5%
3107	4822 050 18203	82k 5%
3108	4822 101 11259	Trimmer 50k
3110	4822 050 11802	1k8 5%
3111	4822 050 11802	1k8 5%
3112	4822 116 52256	2k2 5%
3113	4822 050 11004	100K 5%
3114	4822 050 11004	100K 5%
3115	4822 050 14704	470K 5%
3121	4822 050 11003	10K 5%
3124	4822 116 52252	180K 5%

5101	4822 157 70513	Coil FM
5102	4822 156 30947	RF Coil 1.5 T
5108	4822 157 70107	Coil-M/O 270µH RED
5109	4822 157 70499	IFT-AM 7MM WHT

5110	4822 156 11146	IFT-AM 7MM BLK
5112	4822 242 81535	Cerkit filter 10.7MHz
5113	4822 158 60621	Bar Coil Assy MW 10:60

6101	4822 130 30621	1N4148
6102	4822 130 30621	1N4148
6103	4822 130 30621	1N4148
6104	4822 130 30621	1N4148

7101	4822 209 32746	TEA5711T/N2

Note: Only the parts mentioned in this list are normal service spare parts.

COMBI BOARD

MISCELLANEOUS

1305	4822 265 20287 ⚠	Mains Socket
1305	4822 265 30986 ⚠	Mains Socket /17/37
1306	4822 070 31252 ⚠	Fuse T1.25A 250V
1306	5322 253 30203 ⚠	Fuse T1.6A 250V /17/37
1307	4822 272 10366 ⚠	Voltage Selector /21/41
1550	4822 277 30689	Slide Switch
1780	4822 277 20594	Slide Switch
1901	4822 130 91311	LCD LH6168-C
1912	4822 276 13114	Push Switch
1913	4822 276 13114	Push Switch
1914	4822 276 13114	Push Switch
1915	4822 276 13114	Push Switch
1916	4822 276 13114	Push Switch

2222	4822 124 40242	1µF 20% 63V
2223	4822 122 33197	1nF 10% 50V
2224	4822 124 41643	100µF 20% 16V
2225	4822 124 40196	220µF 20% 16V
2226	4822 124 40433	47µF 20% 25V
2227	4822 121 41854	150nF 5% 63V
2228	4822 124 41997	470µF 10V
2229	4822 122 33307	10nF 5% 50V
2230	4822 122 33169	680pF 10% 50V
2256	4822 124 42119	4700µF 20% 25V
2261	4822 124 41643	100µF 20% 16V
2272	4822 124 40242	1µF 20% 63V
2273	4822 122 33197	1nF 10% 50V
2274	4822 124 41643	100µF 20% 16V
2276	4822 124 40433	47µF 20% 25V
2277	4822 121 41854	150nF 5% 63V
2278	4822 124 41997	470µF 10V
2280	4822 122 33169	680pF 10% 50V
2282	4822 124 41643	100µF 20% 16V
2341	4822 122 33307	10nF 5% 50V
2342	4822 122 33307	10nF 5% 50V
2343	4822 122 33307	10nF 5% 50V
2344	4822 122 33307	10nF 5% 50V
2345	4822 121 51379	100nF 5%
2507	4822 126 12878	1.5nF 10% 16V
2508	5322 121 42465	68nF 5% 63V
2557	4822 126 12878	1.5nF 10% 16V
2558	5322 121 42465	68nF 5% 63V
2610	5322 124 41431	22µF 20% 35V
2611	5322 124 41431	22µF 20% 35V
2612	4822 124 40246	4.7µF 20% 63V
2613	4822 126 11714	4.7nF 20%
2614	4822 126 11714	4.7nF 20%
2615	4822 126 11714	4.7nF 20%
2616	4822 126 12147	22nF 10% 25V

2700	4822 126 12878	1.5nF 10% 16V
2701	4822 126 12147	22nF 10% 25V
2702	4822 124 40433	47µF 20% 25V
2703	4822 126 12147	22nF 10% 25V
2704	4822 121 51305	15nF 10% 50V
2705	4822 124 40242	1µF 20% 63V
2706	4822 126 12878	1.5nF 10% 16V
2707	4822 122 33519	470pF 10% 50V
2708	4822 124 41643	100µF 20% 16V
2709	4822 122 33519	470pF 10% 50V
2715	4822 126 12339	2.2nF 10%
2750	4822 126 12878	1.5nF 10% 16V
2751	4822 126 12147	22nF 10% 25V
2752	4822 124 40433	47µF 20% 25V
2753	4822 126 12147	22nF 10% 25V
2754	4822 121 51305	15nF 10% 50V
2755	4822 124 40242	1µF 20% 63V
2756	4822 126 12878	1.5nF 10% 16V
2757	4822 122 33519	470pF 10% 50V
2758	4822 124 41643	100µF 20% 16V
2759	4822 122 33519	470pF 10% 50V
2760	5322 124 41431	22µF 20% 35V
2761	4822 124 40196	220µF 20% 16V
2762	4822 124 40248	10µF 20% 63V
2763	4822 121 43526	47nF 5% 250V
2765	4822 126 12339	2.2nF 10%
2770	4822 124 40242	1µF 20% 63V
2771	4822 122 33197	1nF 10% 50V
2774	4822 121 51304	10nF 10% 50V
2775	4822 126 11714	4.7nF 20%
2776	4822 126 12147	22nF 10% 25V
2802	4822 122 33069	33pF 5% 50V
2803	4822 122 10574	1.2nF 10% 16V
2804	4822 126 13098	5.6nF 20% 16V
2805	4822 126 10053	180pF 10%
2806	5322 121 42465	68nF 5% 63V
2811	4822 124 40248	10µF 20% 63V
2812	4822 124 40246	4.7µF 20% 63V
2815	4822 124 40239	0.47µF 20% 63V
2817	4822 124 40239	0.47µF 20% 63V
2818	4822 124 41643	100µF 20% 16V
2821	4822 121 51256	39nF 10% 50V
2825	4822 124 40239	0.47µF 20% 63V
2826	4822 121 51256	39nF 10% 50V
2831	5322 121 42465	68nF 5% 63V
2832	4822 124 40242	1µF 20% 63V
2833	4822 126 11714	4.7nF 20%
2834	4822 126 12147	22nF 10% 25V
2836	4822 126 11714	4.7nF 20%
2837	4822 124 40239	0.47µF 20% 63V
2838	4822 126 12339	2.2nF 10%
2839	4822 126 12882	100nF +80-20% 50V

COMBI BOARD

2840	4822 126 12882	100nF +80-20% 50V
2842	4822 124 40244	2.2µF 20% 63V
2843	4822 124 23794	470µF 20% 16V
2844	4822 124 40433	47µF 20% 25V
2851	4822 122 10459	560pF 10% 50V
2852	4822 121 43396	120nF 5% 63V
2854	4822 126 12878	1.5nF 10% 16V
2859	4822 121 42408	220nF 5% 63V
2864	4822 124 40242	1µF 20% 63V
2866	4822 126 12148	2.7nF 10%
2867	4822 126 10003	33nF 30% 50V
2874	4822 124 40242	1µF 20% 63V
2876	4822 126 12148	2.7nF 10%
2877	4822 126 10003	33nF 30% 50V
2883	4822 124 41997	470µF 10V
2886	4822 121 51252	470nF 5% 63V
2888	4822 124 40433	47µF 20% 25V
2889	4822 124 40433	47µF 20% 25V
2890	4822 121 51252	470nF 5% 63V
2891	4822 124 40196	220µF 20% 16V
2892	4822 122 33197	1nF 10% 50V
2893	4822 121 51387	10nF 20% 16V
2913	4822 126 12147	22nF 10% 25V
2924	4822 124 40746	0.22µF 20% 63V

3220	4822 116 52206	120Ω 5% 0.5W
3222	4822 116 52224	470Ω 5% 0.5W
3227	4822 050 24708	4Ω7 1% 0.6W
3263	4822 116 52234	100k 5% 0.5W
3265	4822 116 52251	18k 5% 0.5W
3270	4822 116 52206	120Ω 5% 0.5W
3272	4822 116 52224	470Ω 5% 0.5W
3277	4822 050 24708	4Ω7 1% 0.6W
3500	4822 102 10417	Potm 50kB x 2
3501	4822 116 52283	4k7 5% 0.5W
3503	4822 116 52283	4k7 5% 0.5W
3506	4822 116 52296	6k8 5% 0.5W
3551	4822 116 52283	4k7 5% 0.5W
3553	4822 116 52283	4k7 5% 0.5W
3556	4822 116 52296	6k8 5% 0.5W
3610	4822 116 52244	15k 5% 0.5W
3611	4822 116 52244	15k 5% 0.5W
3612	4822 116 52244	15k 5% 0.5W
3614	4822 116 52244	15k 5% 0.5W
3620	4822 116 52233	10k 5% 0.5W
3670	4822 116 52233	10k 5% 0.5W
3700	4822 116 52269	3k3 5% 0.5W
3701	4822 116 52238	12k 5% 0.5W
3702	4822 116 52219	330Ω 5% 0.5W

3703	4822 116 52303	8k2 5% 0.5W
3704	4822 116 52197	56Ω 5% 0.5W
3705	4822 116 52224	470Ω 5% 0.5W
3707	4822 116 52175	100Ω 5% 0.5W
3708	4822 116 52233	10k 5% 0.5W
3709	4822 116 52239	120k 5% 0.5W
3713	4822 116 52233	10k 5% 0.5W
3714	4822 050 11002	1k 1% 0.4W
3716	4822 116 52233	10k 5% 0.5W
3717	4822 050 11002	1k 1% 0.4W
3750	4822 116 52269	3k3 5% 0.5W
3751	4822 116 52238	12k 5% 0.5W
3752	4822 116 52219	330Ω 5% 0.5W
3753	4822 116 52303	8k2 5% 0.5W
3754	4822 116 52197	56Ω 5% 0.5W
3755	4822 116 52224	470Ω 5% 0.5W
3757	4822 116 52175	100Ω 5% 0.5W
3758	4822 116 52233	10k 5% 0.5W
3759	4822 116 52239	120k 5% 0.5W
3760	4822 111 30893	4M7 5% 0.2W
3761	4822 116 52195	47Ω 5% 0.5W
3762	4822 116 52245	150k 5% 0.5W
3763	4822 116 52233	10k 5% 0.5W
3764	4822 116 52303	8k2 5% 0.5W
3766	4822 116 52233	10k 5% 0.5W
3767	4822 050 11002	1k 1% 0.4W
3771	4822 116 52245	150k 5% 0.5W
3772	4822 116 52176	10Ω 5% 0.5W
3773	4822 116 52206	120Ω 5% 0.5W
3775	4822 116 52284	47k 5% 0.5W
3801	4822 116 52303	8k2 5% 0.5W
3802	4822 116 52283	4k7 5% 0.5W
3803	4822 116 52303	8k2 5% 0.5W
3805	4822 100 11213	22k 30%lin 0.1W
3808	4822 116 81223	1M2 5%
3809	4822 116 52233	10k 5% 0.5W
3810	4822 116 52271	33k 5% 0.5W
3811	4822 116 52284	47k 5% 0.5W
3814	4822 116 52252	180k 5% 0.5W
3815	4822 116 52276	3k9 5% 0.5W
3816	4822 116 52256	2k2 5% 0.5W
3817	4822 116 52197	56Ω 5% 0.5W
3818	4822 050 11002	1k 1% 0.4W
3819	4822 116 52292	560k 5% 0.5W
3821	4822 116 52175	100Ω 5% 0.5W
3822	4822 116 52233	10k 5% 0.5W
3823	4822 116 52234	100k 5% 0.5W
3824	4822 116 52296	6k8 5% 0.5W
3825	4822 116 52256	2k2 5% 0.5W
3828	4822 116 52249	1k8 5% 0.5W
3829	4822 116 81682	2M2 5% 0.5W
3830	4822 116 52238	12k 5% 0.5W

3831	4822 116 52304	82k 5% 0.5W
3832	4822 116 52244	15k 5% 0.5W
3833	4822 116 52257	22k 5% 0.5W
3834	4822 116 52234	100k 5% 0.5W
3836	4822 116 52257	22k 5% 0.5W
3837	4822 116 52269	3k3 5% 0.5W
3840	4822 116 52284	47k 5% 0.5W
3841	4822 116 52233	10k 5% 0.5W
3842	4822 116 52222	390Ω 5% 0.5W
3843	4822 116 52233	10k 5% 0.5W
3844	4822 116 52231	820Ω 5% 0.5W
3845	4822 116 52233	10k 5% 0.5W
3846	4822 116 52224	470Ω 5% 0.5W
3847	4822 116 52257	22k 5% 0.5W
3848	4822 116 52257	22k 5% 0.5W
3849	4822 116 52224	470Ω 5% 0.5W
3850	4822 116 52224	470Ω 5% 0.5W
3852	4822 116 52228	680Ω 5% 0.5W
3853	4822 116 52271	33k 5% 0.5W
3854	4822 116 52277	39k 5% 0.5W
3857	4822 116 52256	2k2 5% 0.5W
3865	4822 116 52284	47k 5% 0.5W
3866	4822 050 11002	1k 1% 0.4W
3867	4822 116 52224	470Ω 5% 0.5W
3869	4822 116 52233	10k 5% 0.5W
3875	4822 116 52284	47k 5% 0.5W
3876	4822 050 11002	1k 1% 0.4W
3877	4822 116 52224	470Ω 5% 0.5W
3879	4822 116 52233	10k 5% 0.5W
3881	4822 116 52233	10k 5% 0.5W
3884	4822 116 52175	100Ω 5% 0.5W
3886	4822 052 10478 ⚠	4Ω7 5% 0.33W
3887	4822 050 11002	1k 1% 0.4W
3911	4822 116 52283	4k7 5% 0.5W
3912	4822 116 52283	4k7 5% 0.5W
3913	4822 116 52283	4k7 5% 0.5W
3914	4822 116 52283	4k7 5% 0.5W
3915	4822 116 52269	3k3 5% 0.5W
3916	4822 116 52284	47k 5% 0.5W
3917	4822 116 52284	47k 5% 0.5W
3918	4822 116 52284	47k 5% 0.5W
3921	4822 116 52284	47k 5% 0.5W
3922	4822 116 52234	100k 5% 0.5W
3931	4822 050 24708	4Ω7 1% 0.6W
3932	4822 116 52207	1k2 5% 0.5W
3933	4822 116 52249	1k8 5% 0.5W
3934	4822 116 52231	820Ω 5% 0.5W

5770	4822 156 20946	Osc Coil 100kHz

5851	4822 242 73557	CST8.46MTW-TF01
5852	4822 157 51195	1µH 20%

6250	5322 130 30684	1N4002
6283	4822 130 30621	1N4148
6341	5322 130 30684	1N4002
6342	5322 130 30684	1N4002
6343	5322 130 30684	1N4002
6344	5322 130 30684	1N4002
6609	4822 130 30621	1N4148
6610	4822 130 30621	1N4148
6611	4822 130 30621	1N4148
6612	4822 130 30621	1N4148
6911	4822 130 30621	1N4148
6912	4822 130 30621	1N4148
6920	4822 130 30621	1N4148
6921	4822 130 30621	1N4148
6922	5322 130 30684	1N4002

7220	4822 209 70372	TA7769P
7250	4822 209 12335	L4941
7263	5322 130 60068	TBC558C
7620	4822 130 44196	TBC548C
7670	4822 130 44196	TBC548C
7700	4822 209 32918	AN7318S
7770	4822 130 40937	TBC548B
7801	4822 209 72814	M51567P
7811	4822 209 72815	M51564P
7841	4822 209 32852	TDA7073A/N2
7842	4822 209 32852	TDA7073A/N2
7851	4822 209 62371	M50427AFP
7852	4822 209 70422	MN4264-15
7861	4822 209 32421	TDA1311A/N2
7867	4822 130 44196	TBC548C
7877	4822 130 44196	TBC548C
7901	4822 209 33073	M68HC05P4
7902	5322 209 10421	HEF4094BP
7931	4822 130 41246	BC327-25

Note : Only the parts mentioned in this list are normal service spare parts.

MISCELLANEOUS PARTSLIST

	MISCELLANEOUS	
1730	4822 691 20904	Tape Deck YS37Z
1805	4822 276 12163	Leaf-SW LSA-1119G
1840	4822 691 20768	RCD-1.2D Drive Assy
5225	4822 240 30689	Loudspeaker 6Ω 2W
5275	4822 240 30689	Loudspeaker 6Ω 2W
	⏦	
5300	4822 146 31319 ⚠	Transformer

Note : Only the parts mentioned in this list are normal service spare parts.

(GB) WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD) Careless handling during repair can reduce life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance.
Keep components and tools also at this potential.

ESD

(NL) WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD).
Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen.
Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.
Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

(F) ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD).
Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation.
Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfiler le bracelet serti d'une résistance de sécurité.
Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

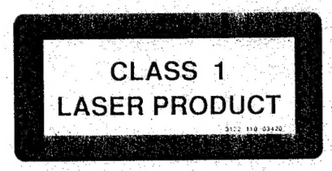
(D) WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD).
Unsorgfältige Behandlung im Reparaturfall kan die Lebensdauer drastisch reduzieren.
Veranlassen Sie, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand verbunden sind mit dem gleichen Potential wie die Masse des Gerätes.
Bauteile und Hilfsmittel auch auf dieses gleiche Potential halten.

(I) AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).
La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione.
Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza.
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".



(GB)

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified, be used.

(NL)

Veiligheidsbepalingen vereisen, dat het apparaat bij reparatie in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.

(F)

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisées les piéces de rechange identiques à celles spécifiées.

(D)

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Original zustand des Geräts darf nicht verändert werden; für Reparaturen sind Original-Ersatzteile zu verwenden.

(I)

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambio identici a quelli specificati.

"After servicing and before returning set to customer perform a leakage current measurement test from all exposed metal parts to earth ground to assure no shock hazard exist. The leakage current must not exceed 0.5mA."

(GB) Warning !

Invisible laser radiation when open.
Avoid direct exposure to beam.

(S) Varning !

Osynlig laserstrålning när apparaten är öppnad och spärren är urkopplad. Betrakta ej strålen.

(SF) Varoitus !

Avatussa laitteessa ja suojalukituksen ohitettaessa olet alttiina näkymättömälle laserisäteilylle. Älä katso säteeseen!

(DK) Advarse !

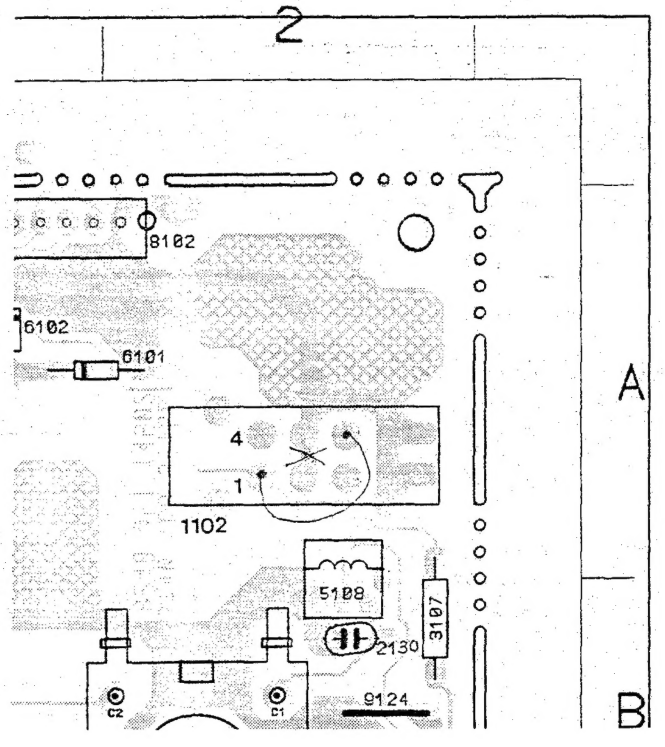
Usynlig laserstråling ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsaettelse for stråling.

TUNER BOARD REWORK

For Sets with 2 band (FM/AM) Tuner only

Due to wrong printing of the Panel Front Assy ("FM" and "AM" are reverse) the following rework were made on the production floor for sets with SV code "00" :

1. Jumper between pin 1 and 6 of item 1102
2. Cut copper track between pin 2 and 5 of item 1102



Only Panel Front Assy with the correct printing will be in stock. In case there is a need to change the Panel Front Assy (pos. 280, 4822 423 51167, 4822 423 51169) for sets with SV code "00", do the following :

1. Remove the jumper.
2. Join pin 2 and 5 of item 1102